ED017152

the area community college
WHY A MASTER PLAN?

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

EF001332

This book is designed to suggest a bold approach to the development of a community college.

rea Community College / WHY A MASTER PLAN?

"Why A Master Plan?" was prepared by The Perkins & Will Partnership, Architects, at the request of Dr. Louis W. Bender, Director, Bureau of Community Colleges, Department of Public Instruction, Commonwealth of Pennsylvania, for distribution to assist trustees, administrators and community leaders in understanding the concept of master planning

The Partnership expresses its deep appreciation to Dr. Bender for his very helpful consultation during the preparation of the book.

why a master plan?

contents

What Is a Master Plan 4
Whom Should a Community College Serve 6
What Should They Learn 8
We Must Plan for Tomorrow 13
How Will Your Campus Encourage Education 17
What Kind of Buildings 18
Uncommitted Space 22
Where Should Your Campus Be 26
Campus Form Generators 28
How Much Will It Cost 32
The Search for Identity 34
Case Study 1: Lorain County Community College 35
Case Study 2: Knight Campus, Rhode Island Junior College .. 39
Case Study 3: Rockland Community College 43
Case Study 4: Orchard Ridge, Oakland Community College .. 47
Case Study 5: College of Alameda, Alameda, California 51
Case Study 6: Community + College 55
Procedure for Master Planning 61
For More Information 62

the challenge

The Community College is an American social invention. It is an instrument of tremendous potential. It can motivate youth who have had little hope for learning beyond the high school. It can lift the sights and strengthen the efforts of the generation wanting to go beyond their fathers' achievements. It can stimulate the creativity and slumbering interests of adults. It can provide the means for training that lead to a higher level of employment. It can train for the new skills demanded by a changing technology. It can serve as a focal point for community identification. Oriented to the community, controlled by the community, it can be the catalyst for the processes by which the values of a free world's culture can be refined and advanced.

Dr. Edmund J. Gleazer, Jr., *Executive Director*
American Association of Junior Colleges

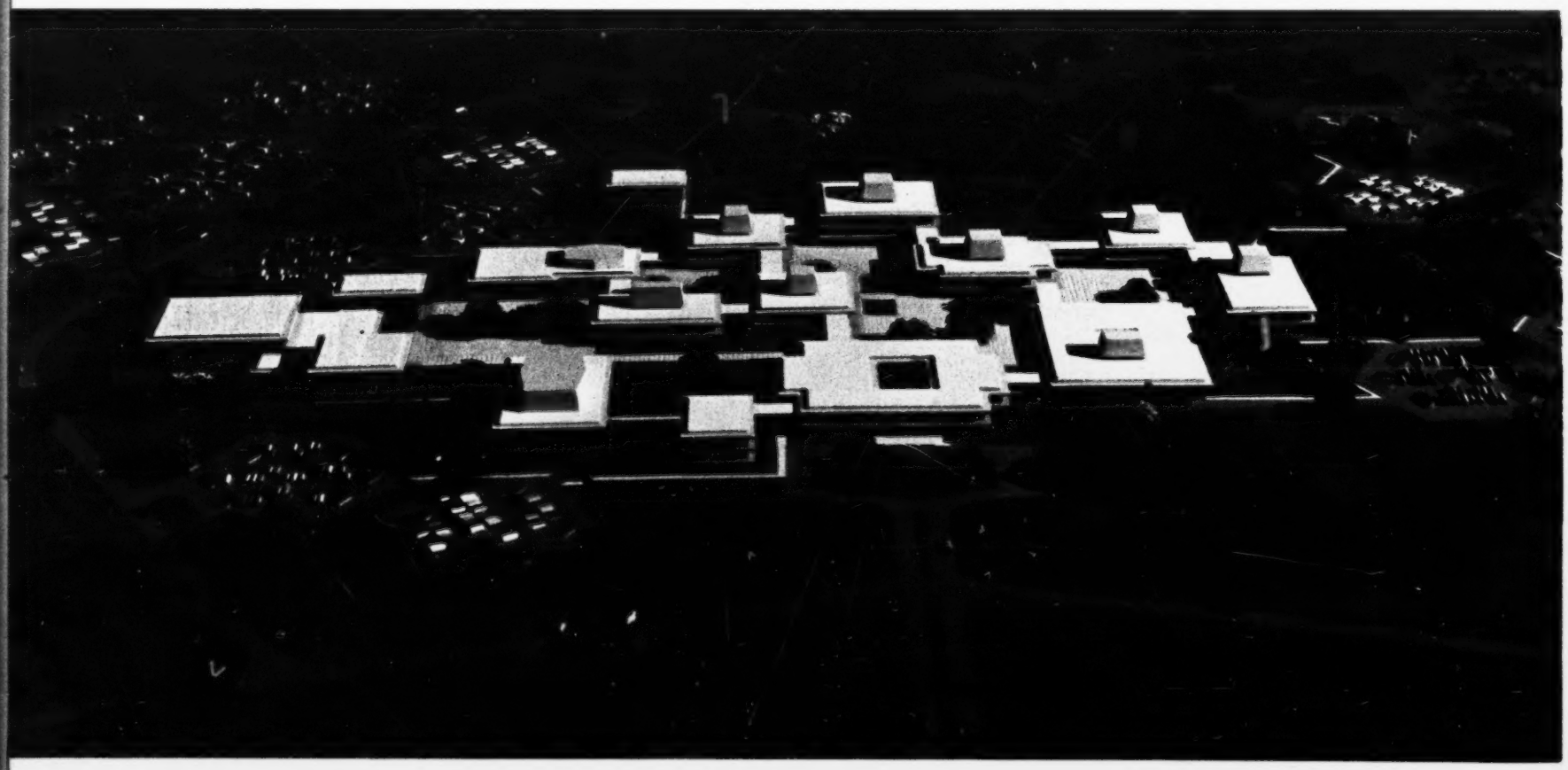
what is a master plan?

It is an action plan for growth and includes:

Verbal statements of philosophy, goals, educational program, enrollment projections, completion schedules and costs.

Graphic statements of the campus location, size, form, appearance and environment.

The college president assembles a team of experts in educational programming, architectural design and financial planning to produce a plan which expresses the philosophy and policies laid down by the Board of Trustees. The team generally operates under the leadership of the architect.

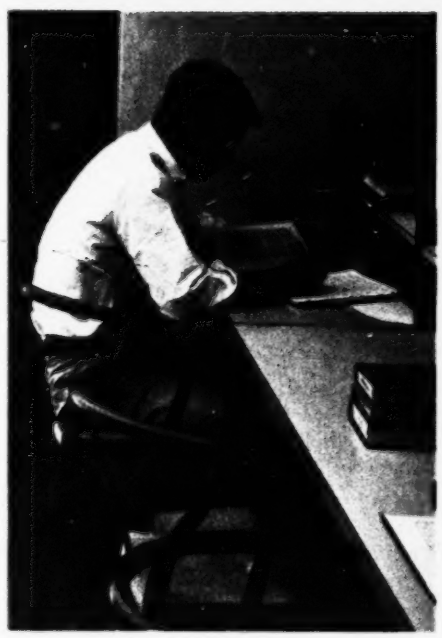


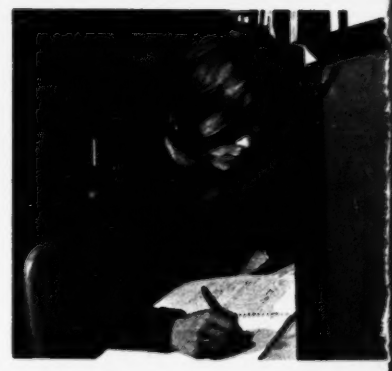
what kind of community college do you want?

you must decide!

whom should it serve?

Do you want your college to attract young people, adults or elder citizens? Will it offer courses for housewives, nurses, mechanics, music lovers, technicians, factory workers, salesmen, hobbyists, engineers or secretaries? Will it prepare high school graduates for college work, or serve local business and industry needs, or provide continuing education for adults? Do you want to reach a specialized group or the whole community? Your community college will serve...





a wider range of age groups,
talents and interests than provided for in the past by public education.

what should they learn?

Today's community college offers both occupational subjects and liberal arts. It is not a liberal arts college but it does generally offer liberal arts courses such as language, drama, art, and music. It is not primarily a vocational-technical college but it does generally offer occupational training in technical and semi-professional areas. In fact, the community college offers...

a wider range of subjects

than those provided for in the past by public education. The community college is a direct response to the educational needs of its own community!

some typical courses :

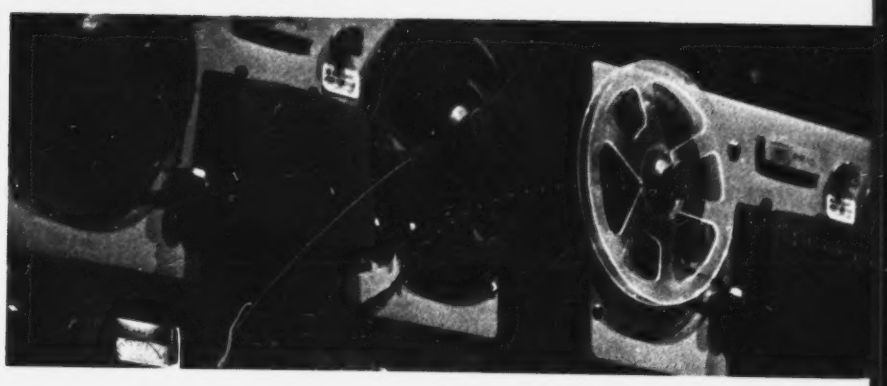
- ☐ liberal arts
- ☐ forestry
- ☐ arts & crafts
- ☐ music
- ☐ medical technology
- ☐ restaurant management
- ☐ sports & recreation
- ☐ drama & theater
- ☐ public affairs
- ☐ engineering
- ☐ foreign languages
- ☐ nursing
- ☐ business administration
- ☐ home economics
- ☐ agriculture

Add any other courses needed

yesterday's tools

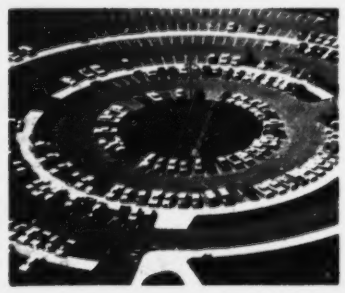
today's

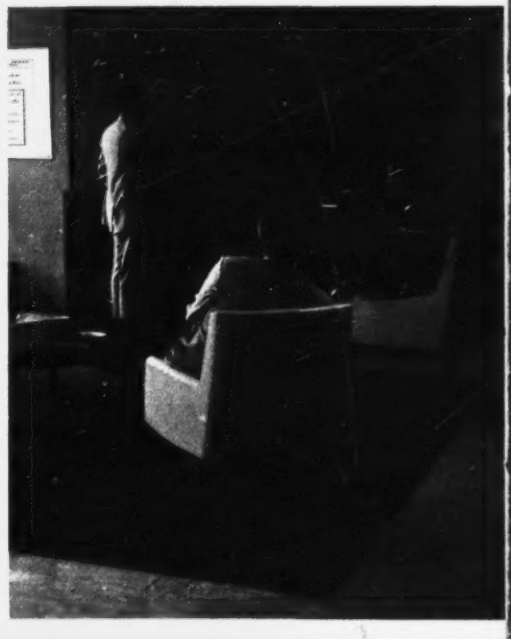
we must plan for tomorrow

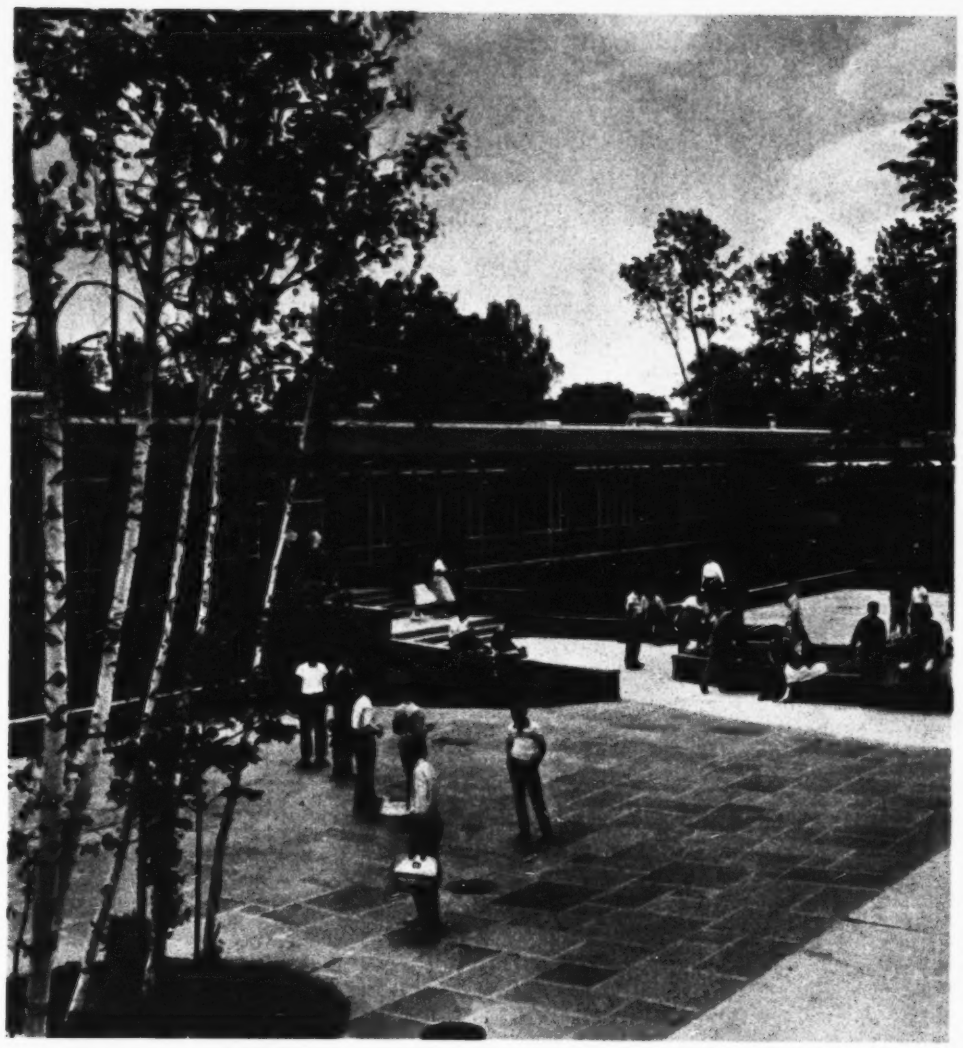


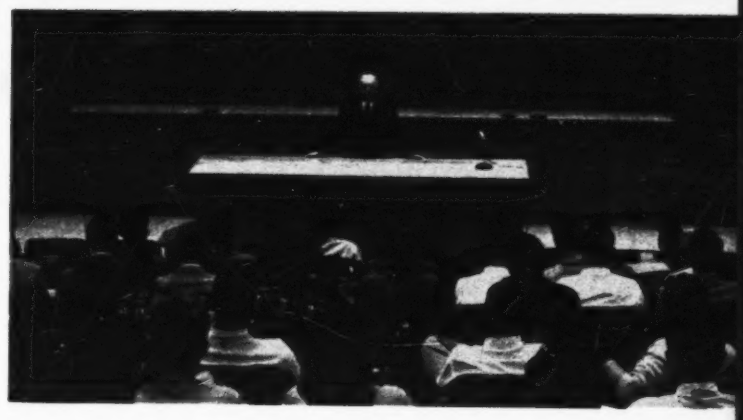
what spaces are needed?

The more interchangeable spaces, the better for overall flexibility. Some spaces must, of course, remain committed to their original functions because of fixed equipment such as seating, special lighting and materials. Uncommitted spaces such as classrooms can be freely adapted to many functions. But above all, in the community college where many students commute, spaces for individual study, socializing, and leisure should be provided. *"Haec otia studia fovent"*—"the leisure we have encourages study." Profitable student leisure time should be encouraged in every way possible.

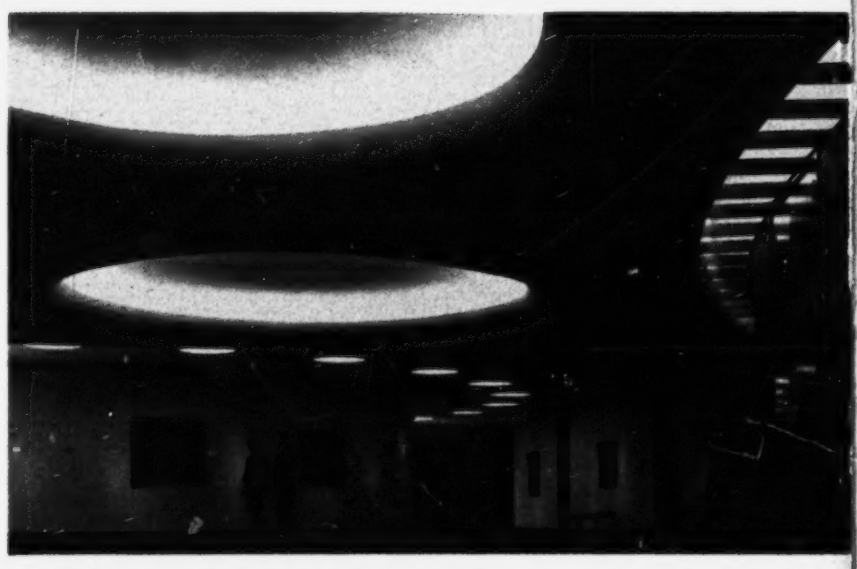


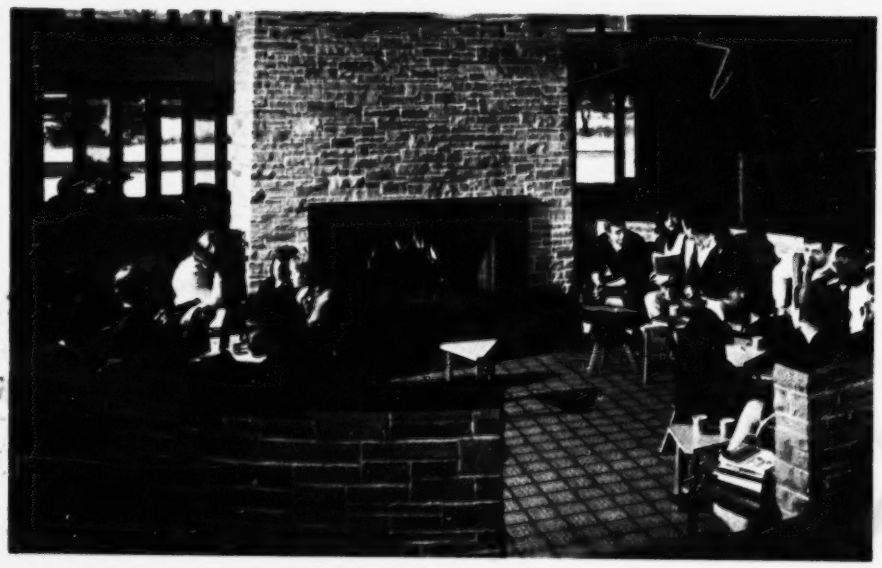






what quality of space is needed?





how will your campus encourage education?

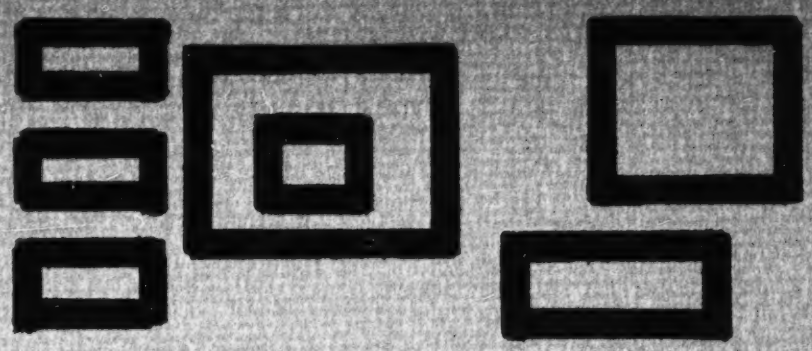
what kind of buildings are needed?

Ideally, educational buildings should give us a sense of stability and permanence, a sense of the depth of time, of our place in the continuity of man's knowledge. A place of learning should not be a fairground but a place of repose and calm where the student can think, digest, and examine.

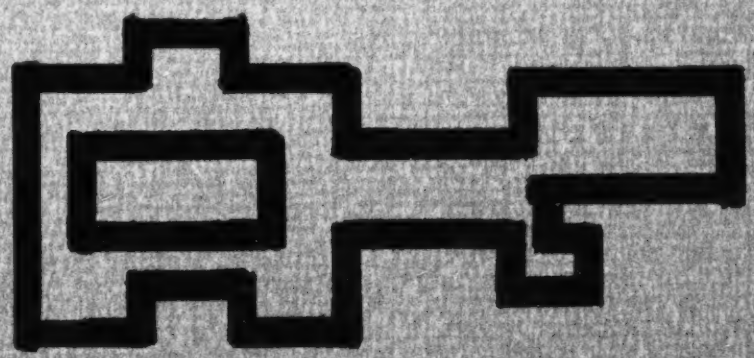
but flexibility is essential

There are as many building plans and shapes as there are human needs; each solution begins with, and grows from, the statement of the need.

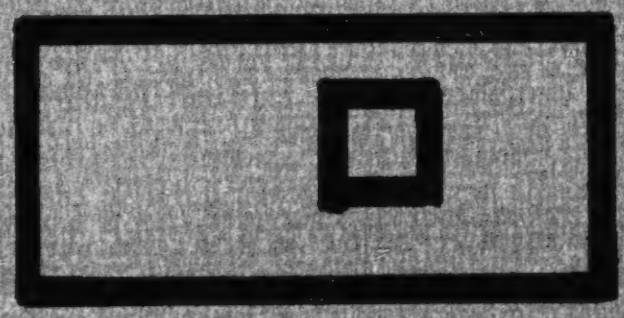
compartmented



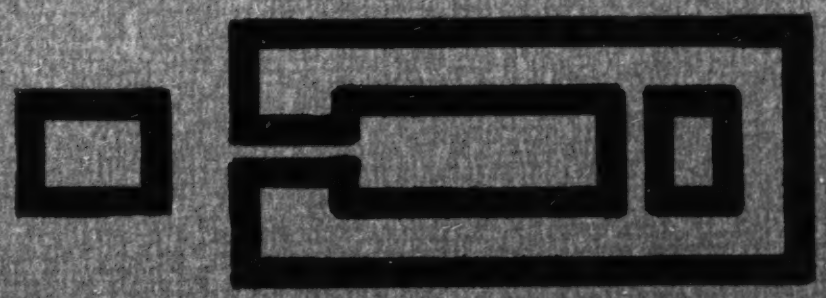
continuous



compact



composite

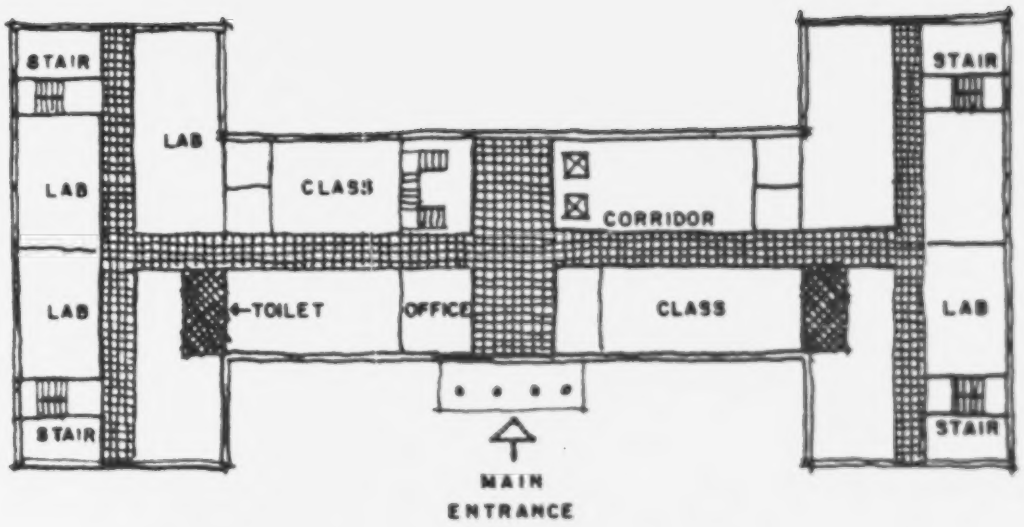


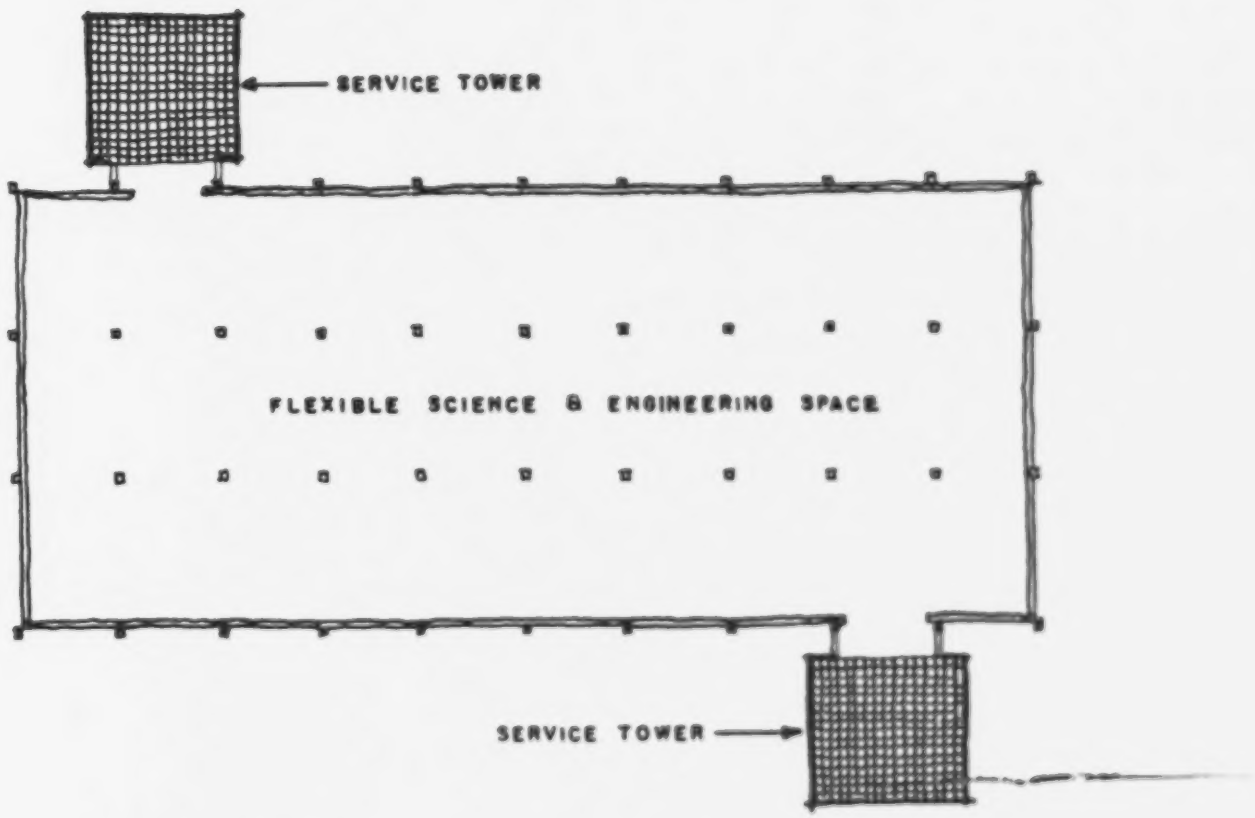
the numbers will change

Committed space is inflexible and may have been designed to take advantage of natural illumination and ventilation. A central corridor and stairs, toilets, and mechanical equipment cut up space into committed areas which lack flexibility.

so will the curriculum

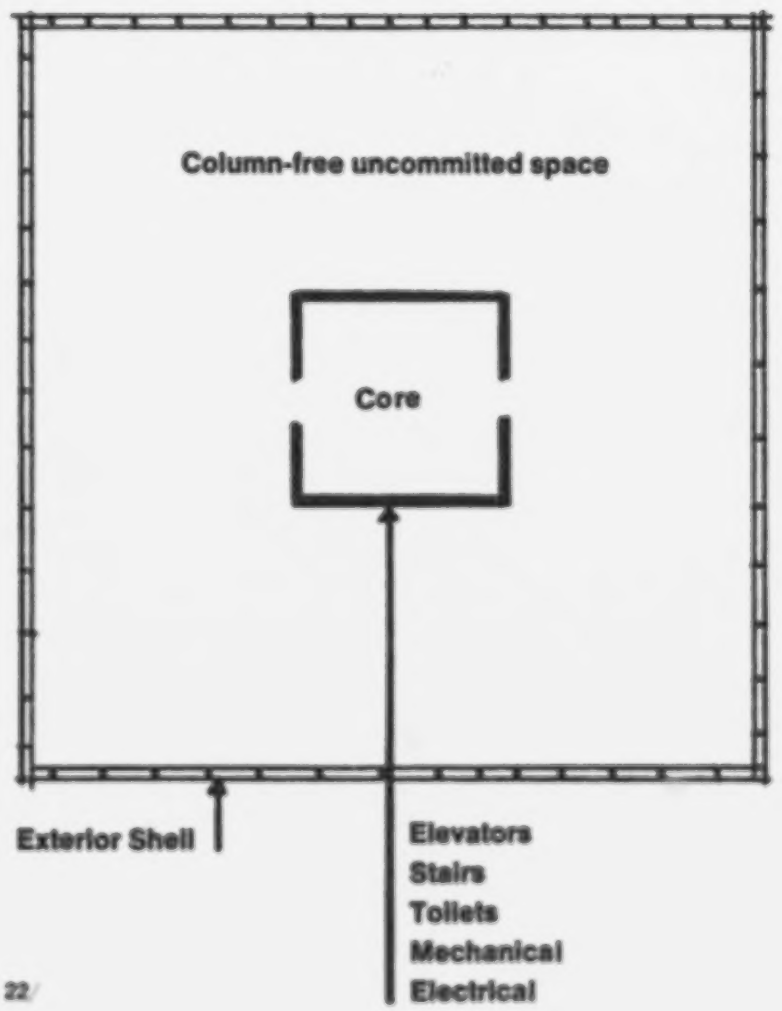
Uncommitted space is designed to achieve large completely unencumbered areas by placing corridors, stairs, toilets, and mechanical equipment on the perimeter. This kind of design is made possible by modern air conditioning and lighting.

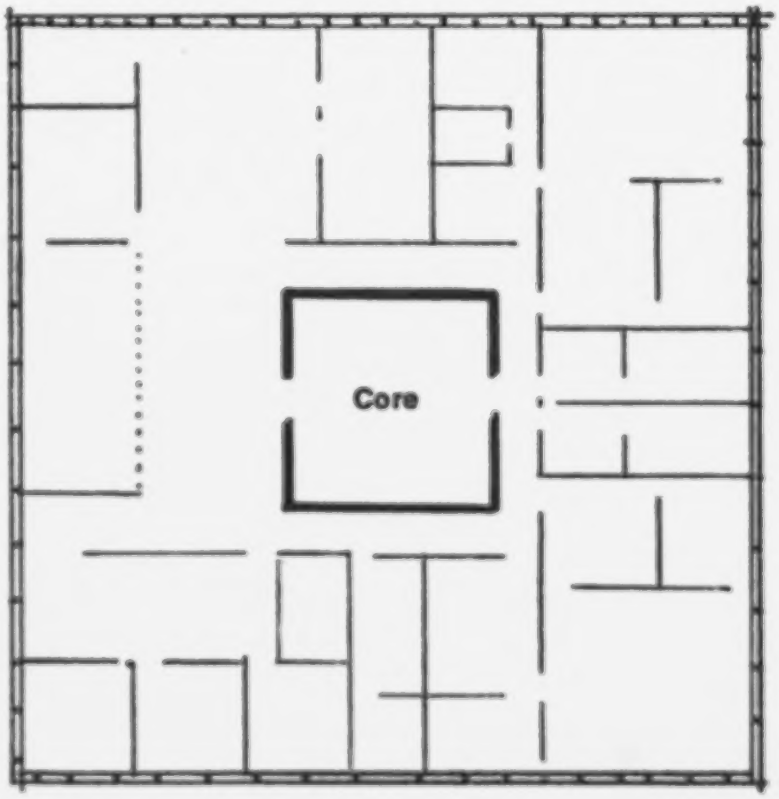

STAIR
LAB
LAB
LAB
STAIR
LAB
CLASS
CORRIDOR
TOILET
OFFICE
CLASS
STAIR
LAB
STAIR
MAIN
ENTRANCE


SERVICE TOWER
FLEXIBLE SCIENCE & ENGINEERING SPACE
SERVICE TOWER

uncommitted space can be divided and redivided

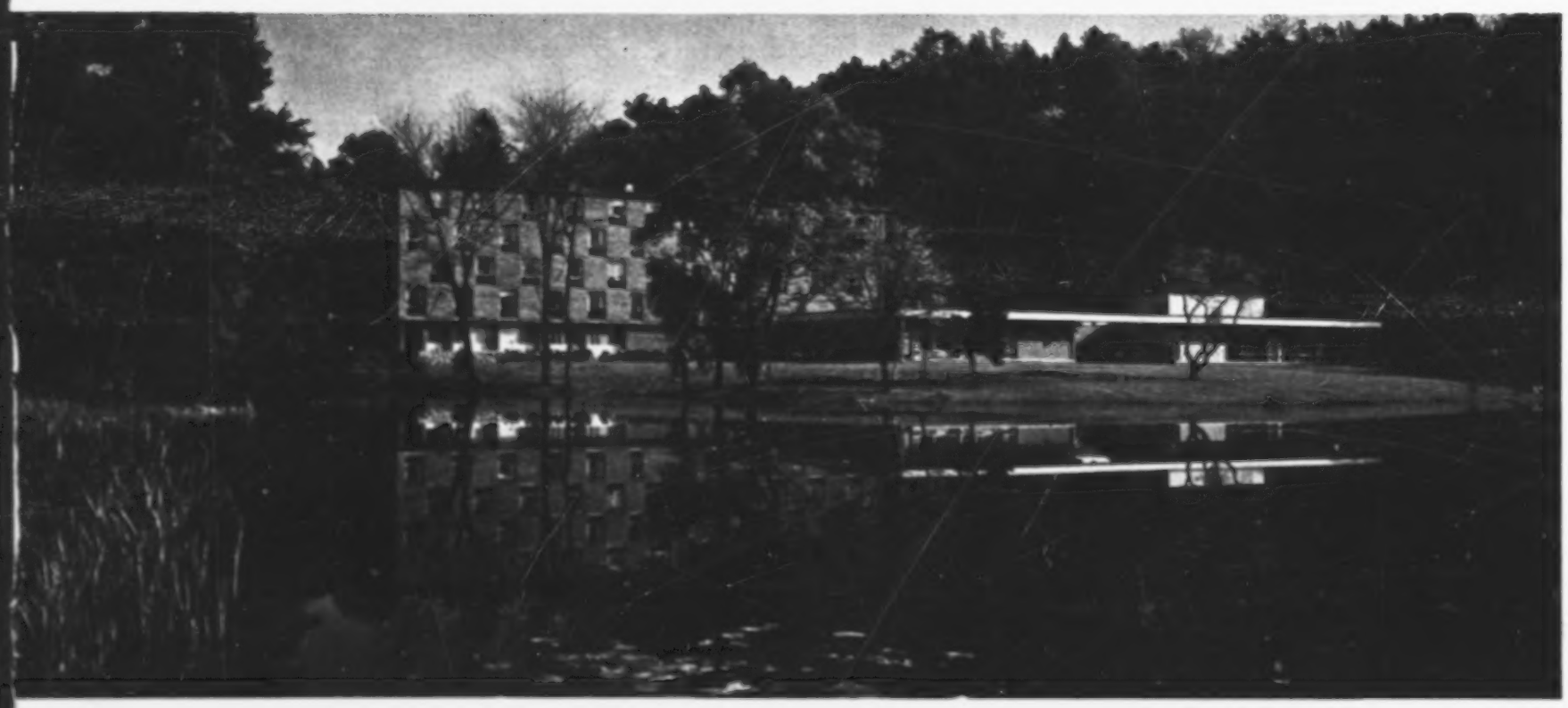
The modern office building provides us with a perfect example of three basic kinds of flexibility: short, medium, and long-term. Provision for short-term flexibility involves day-to-day expediencies such as folding partitions which adapt spaces for varying functions and office sizes. Buildings designed for medium-term flexibility are constructed so that walls may be torn down and rebuilt upon short notice. Such changes can be relatively inexpensive if modular materials are used. Long-term flexibility involves future expansion of the building without interruption of the original facilities. College planners must consider all of these.



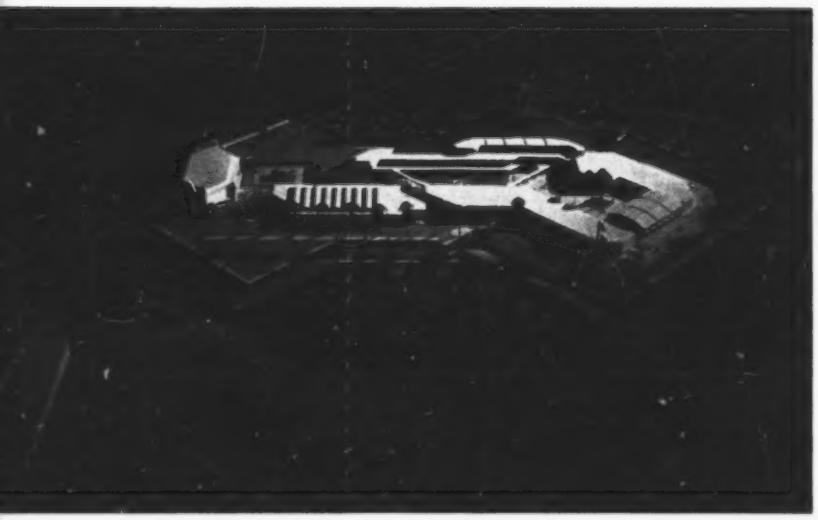


and can be in rural campus buildings

To realize the advantages of flexibility, space need not necessarily be related to high-rise structures which look like office buildings. The structure can be a low single- or multi-story building in park-like surroundings capitalizing on a pastoral atmosphere.



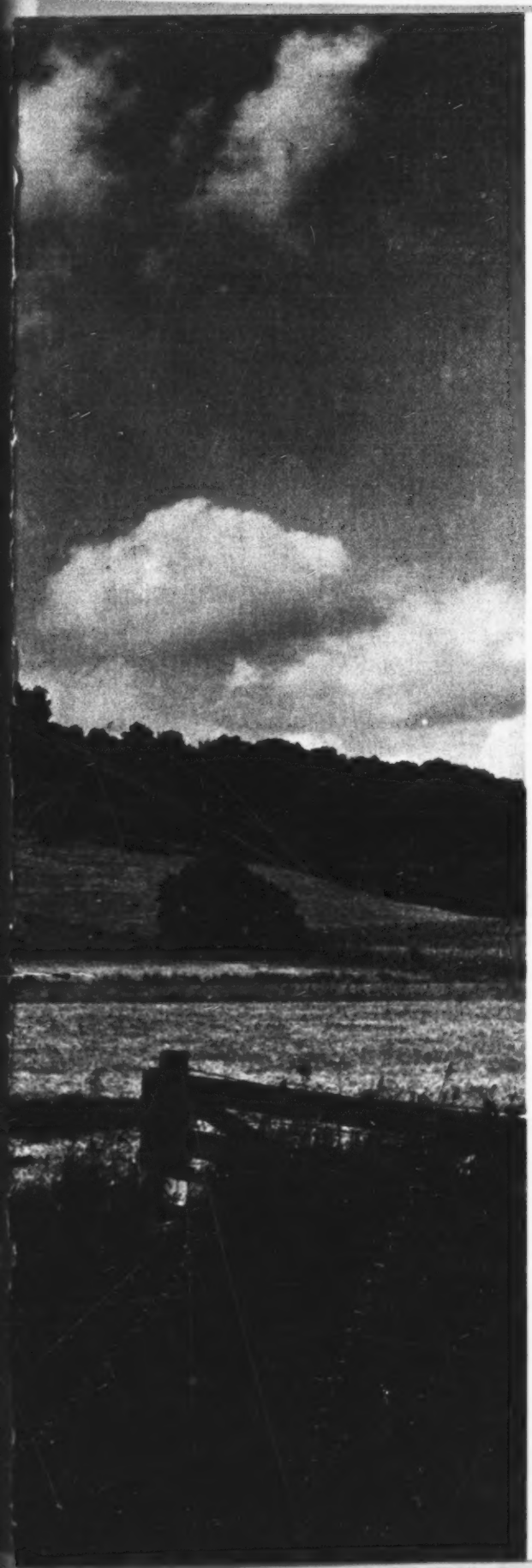
or in suburban continuous structures

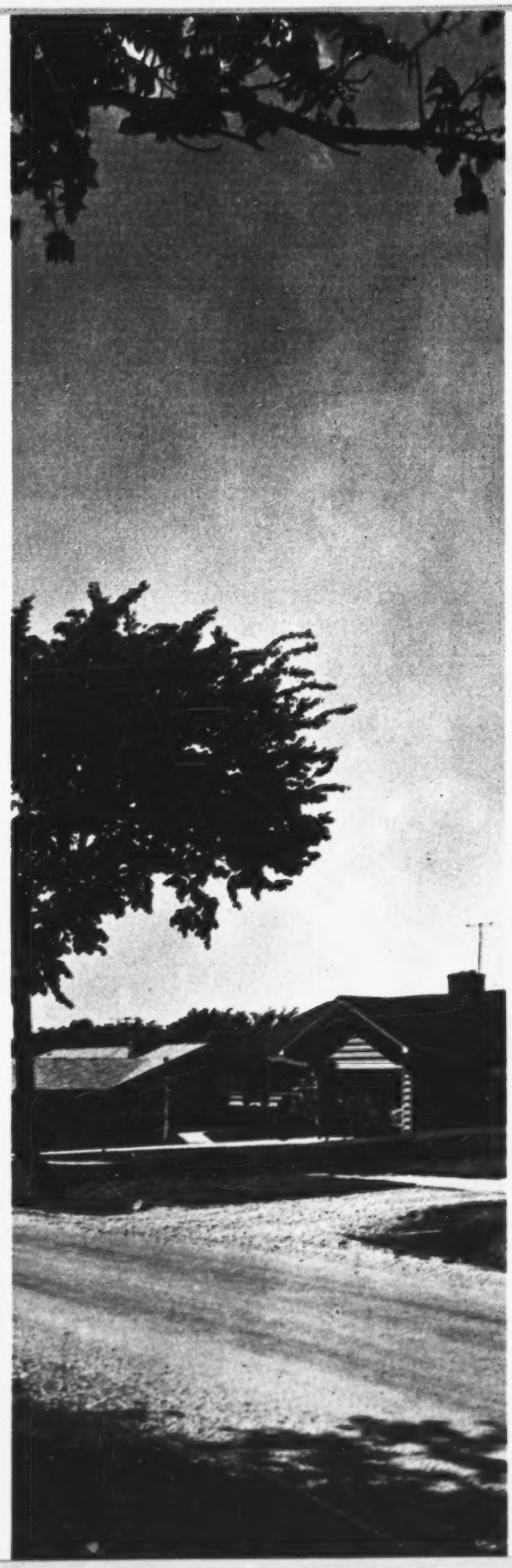


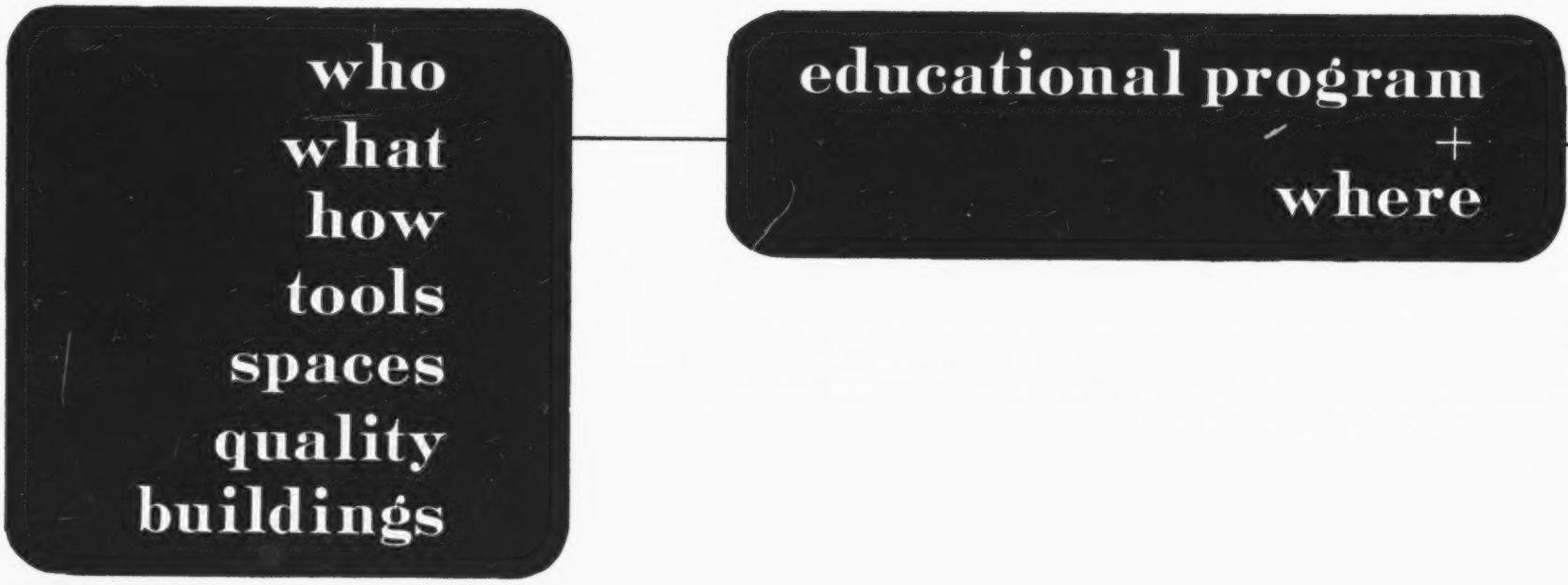
or high-rise in the city!

where should your campus be?

Before selecting a site, you must know the *purpose* of your college and the "who" of the student body. Will your college serve a single small community, a large city or a multi-community area? Will public or private transportation be used by the students? Is a close relationship with local business and industry important? Suburban and rural sites offer abundant, inexpensive land which can serve communities and will permit almost unlimited future growth. The urban site establishes a dynamic relationship between the college and the community; the college building program can generate or enhance urban renewal efforts.







The educational program—or specification—is a translation of the objectives of the institution, in light of the community's needs. The development of a bold educational program is a prerequisite to a bold master plan.

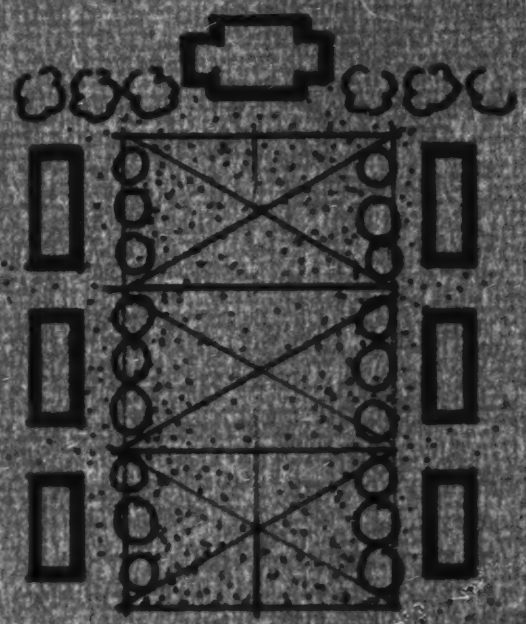
campus form generators

what kind of campus is needed?

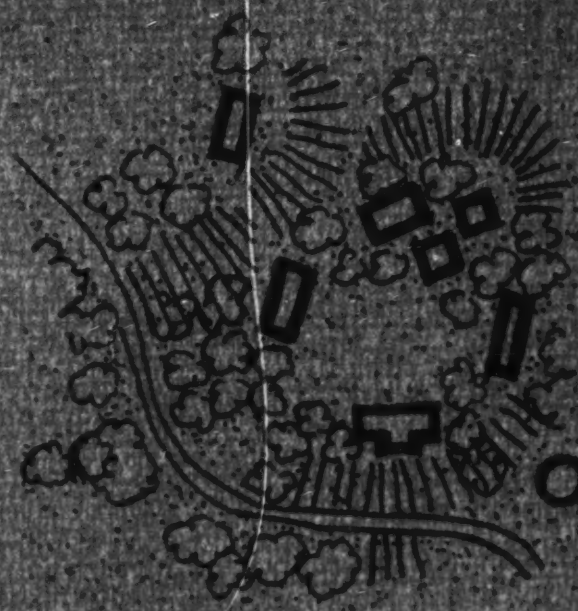
The successful campus design is one which in all probability grew out of the educational program and the site. It is essential that the site be recognized although, in this age of machines, we are not obliged to be completely submissive to nature's obstacles. *We should therefore be masters of our environment.* The campus arrangement can express the strength of man and complement the site, possibly enhancing both. The spaces of the campus are more important and more identifying than the buildings themselves. It is the outdoor spaces which unify all the functions of the college and emphasize the universal breadth of its activities. Having located your campus according to the purpose of your college, you can then create the environment which will best express that purpose.

As with individual buildings, the campus too must bow to changes in curriculum and student population. Individual structures designed for individual disciplines will in all probability inhibit adaptation to changing needs. Buildings as well as spaces should be interchangeable.

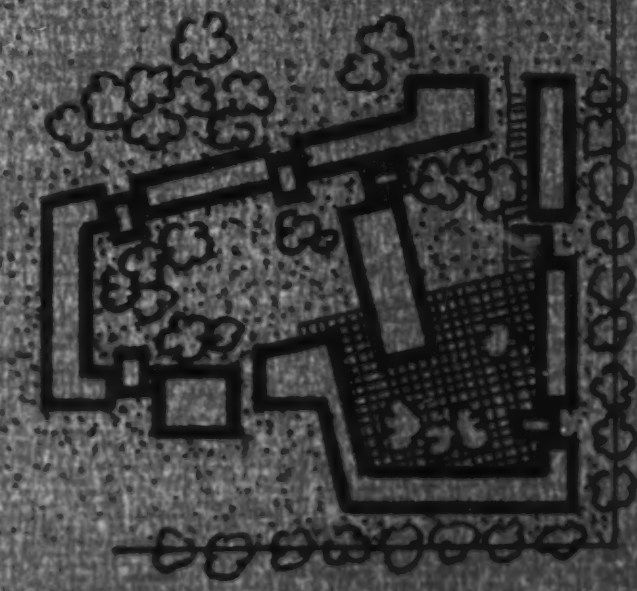
traditional



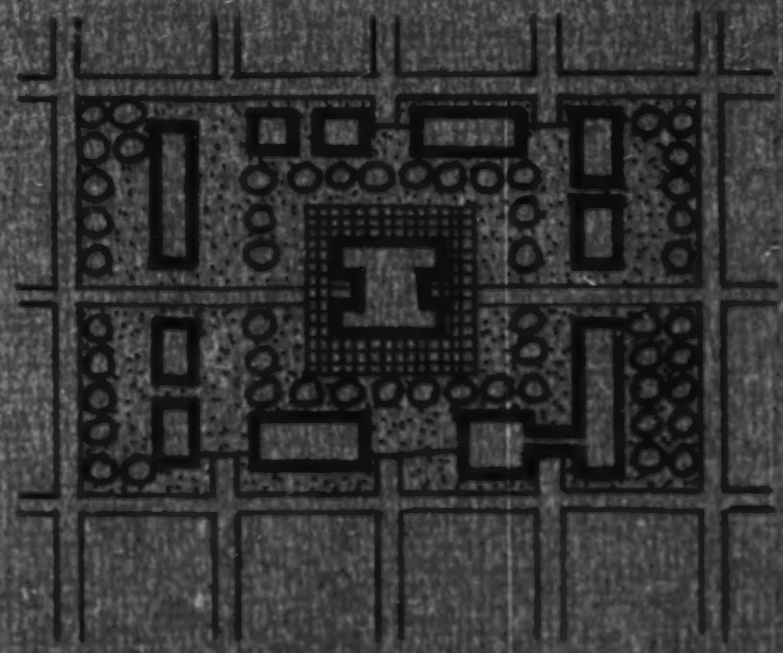
woods & ravines



quadrangles



urban gridiron



how much will it cost?

The capital cost of a campus (as presented to the public for voting purposes) includes buildings, furnishings, equipment, landscaping, roads, parking, boundary improvements, utilities, professional services, and contingencies. The costs must be projected over the life of the college, with incremental increases reflecting the anticipated changes in prices. It should also be remembered that the cost of money itself will constitute a substantial portion of the real final cost of the physical plant.

The total construction may have to be staged according to public acceptance and ability to pay. The demand for space will increase directly in proportion to the demand for education; but the satisfaction of the demand must be consistent with financial ability for building, and a sound fiscal basis for operation.

However, it is essential that it not be forgotten that the capital cost of construction is only a small fraction of the cost of operation over the estimated useful life of the buildings. The capital cost of construction can often be exaggerated out of proportion with the result that plans and quality are subsequently reduced beyond wisdom to the everlasting detriment of the college.

Chart 1 is a typical schedule showing when buildings can be built individually and is generally followed in the case of private institutions.

Chart 2 shows how the same buildings can be grouped into stages which are determined by both need and financing of publicly approved building programs.

Chart 1

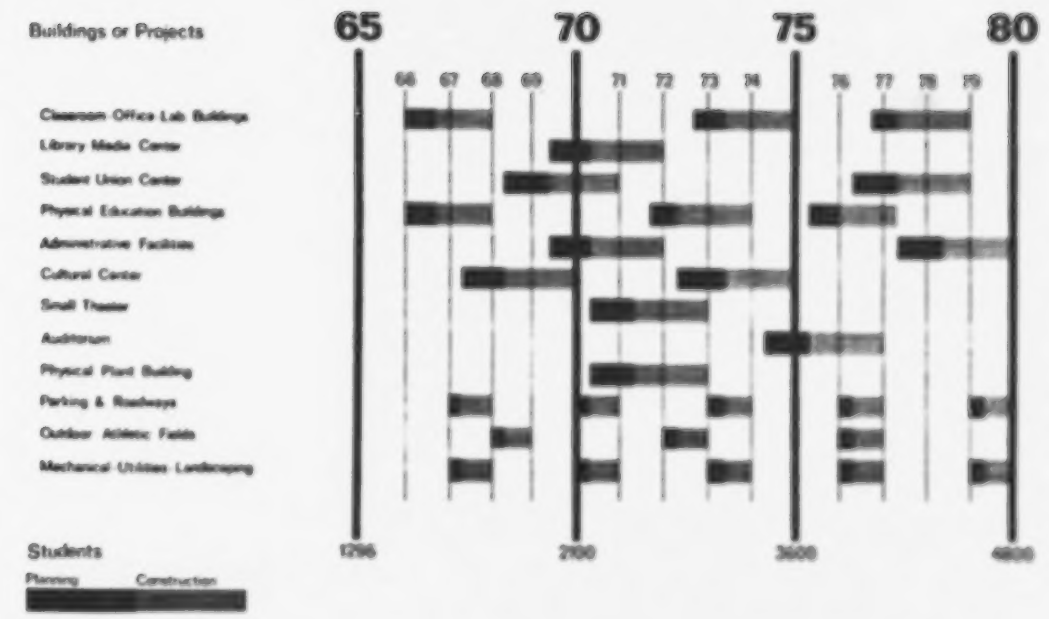
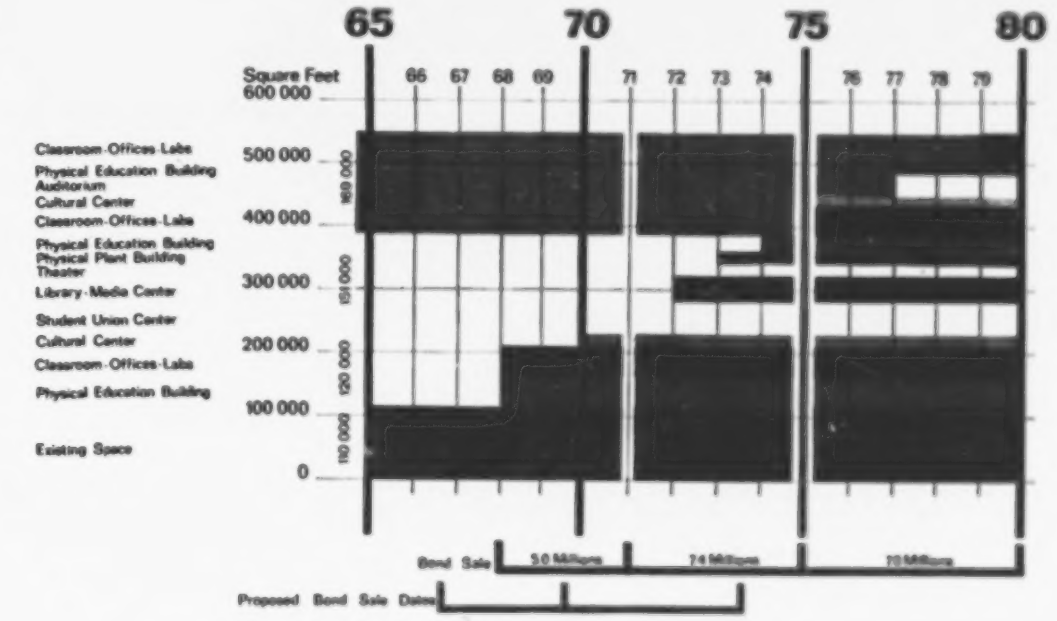


Chart 2



the search for an identity

The area community college is a new form of two-year education created to provide maximum learning opportunities for all citizens. The unique philosophical and physical identity of the area community college grows out of its academic, vocational, adult education, and community service programs and the campus site. These form generators, program and site, are the product of the distinctive needs of your community and must, in turn, shape the character and create the identity of your college.

The campus must look like a community college. It is the responsibility of your architect to create its individual identity.

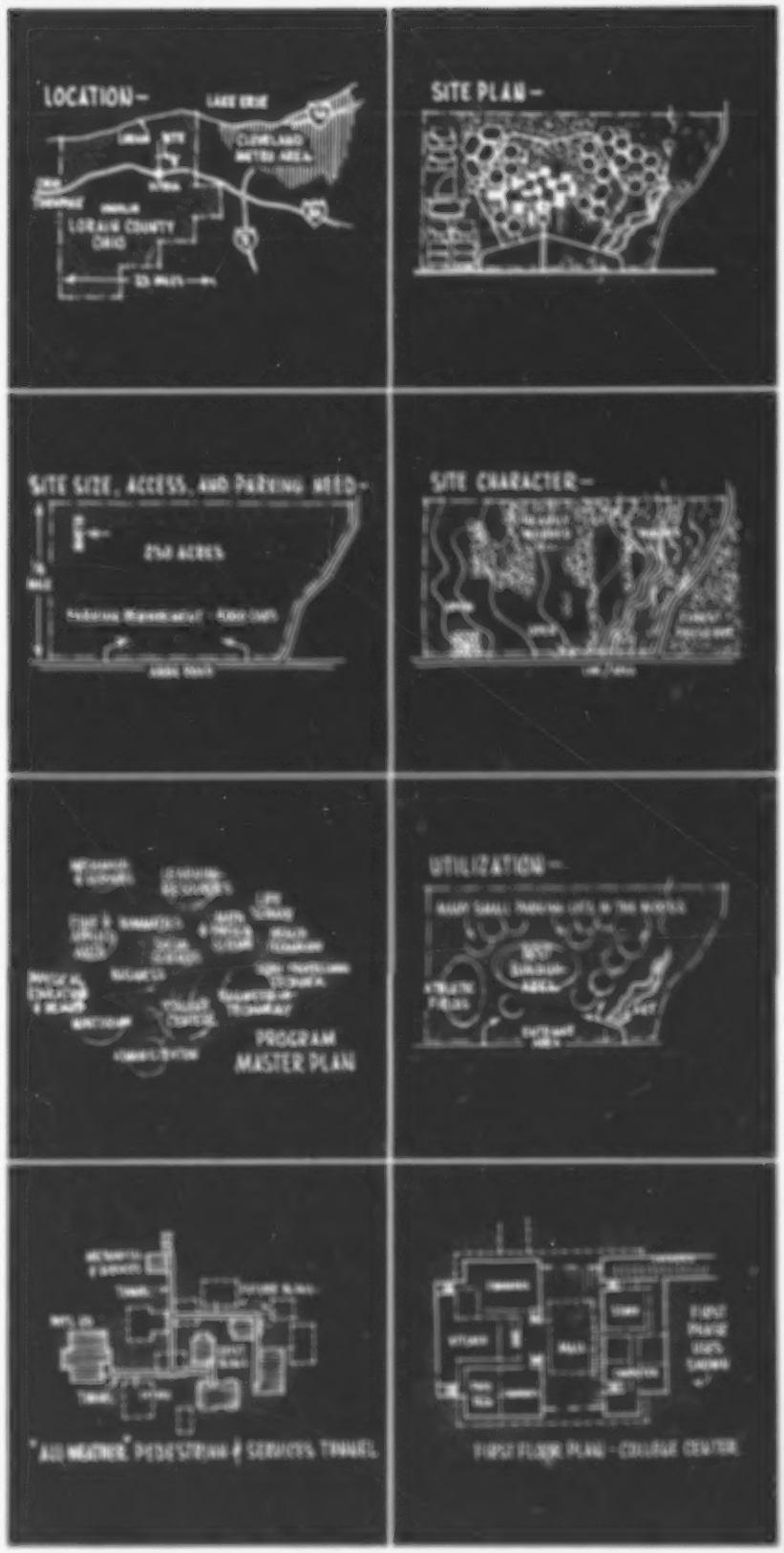
case study 1 | **lorain county community college, lorain, ohio**

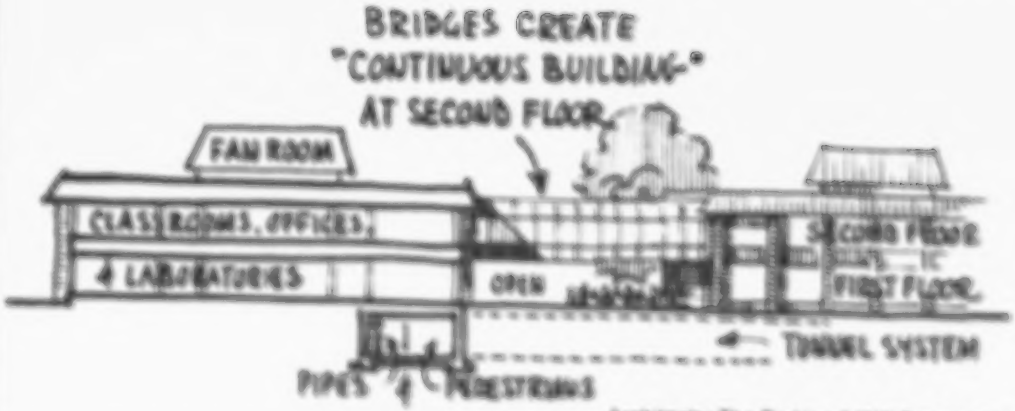
Program

A master plan is required for a community college which offers a variety of curriculum choices with emphasis on semi-professional/technical training. Current enrollment is 2,000 commuter students; maximum future enrollment will be 5,000 students. Although the campus must be constructed in phases, it should offer an appearance of completeness at the end of each phase. Parking facilities must expand with the construction phases to serve an ultimate total of 4,000 cars. Separation of vehicular and pedestrian traffic is desirable. Because the school is the first community college in Ohio, it is important that the campus have its own identity and character to which the students can relate. Students should be encouraged to intermingle regardless of their curriculum choice.

Site
The 250-acre site is relatively flat, semi-rural, and partially wooded—well suited to the program requirements.

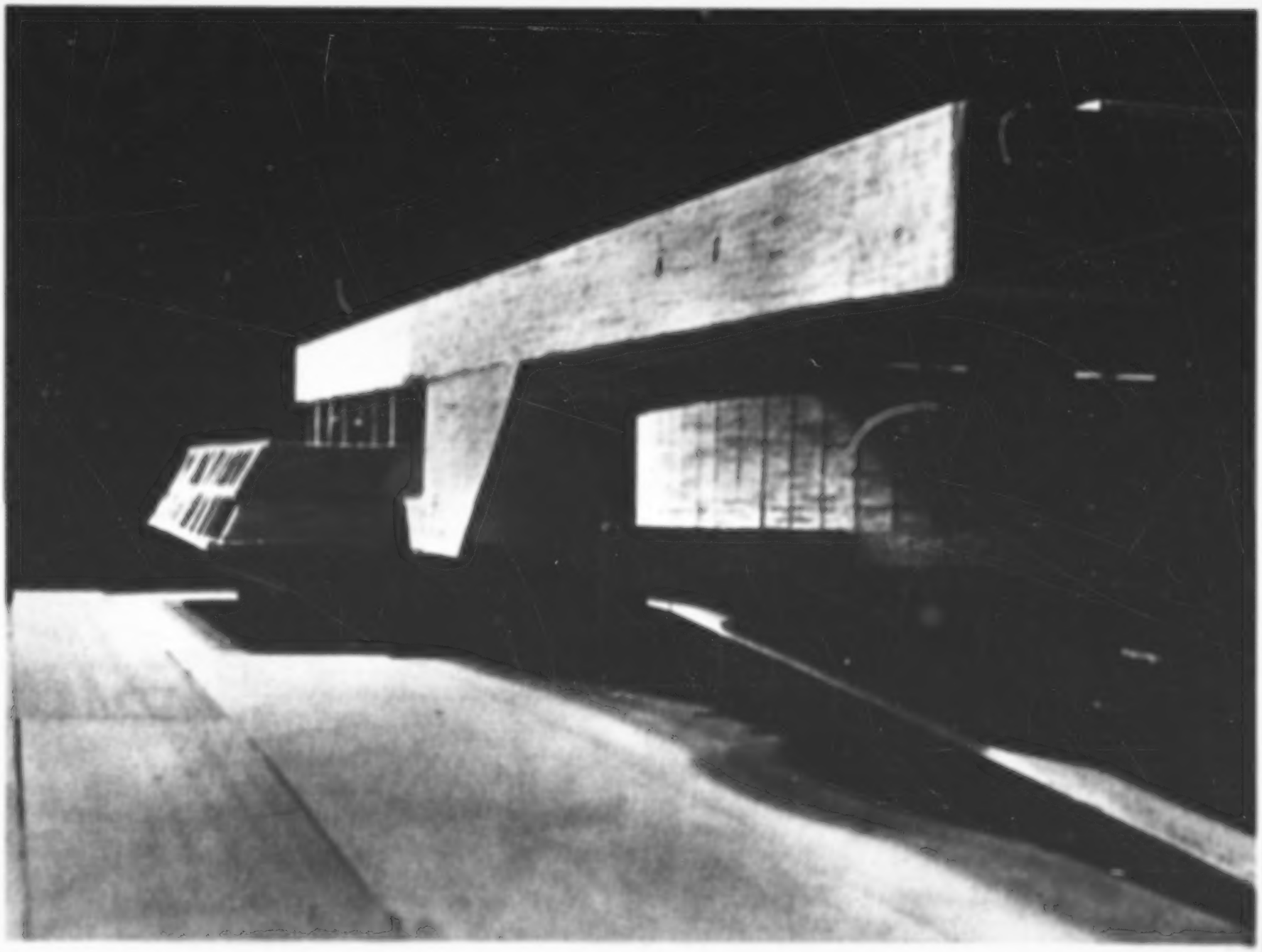
Solution
The semi-rural location, the integrated educational programs, the desire for a warm, friendly environment, and the backdrop of tall trees led to the development of a campus of one and two story buildings. Designed to grow outward from a center core, the cluster of buildings will, during any construction phase, give a sense of completeness. Perimeter corridors and enclosed walkways afford pleasant views of the controlled spaces between buildings and the natural surroundings.

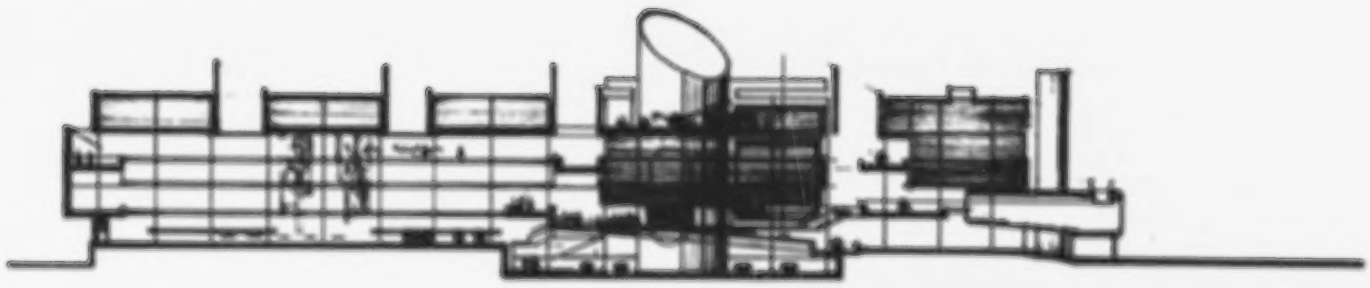


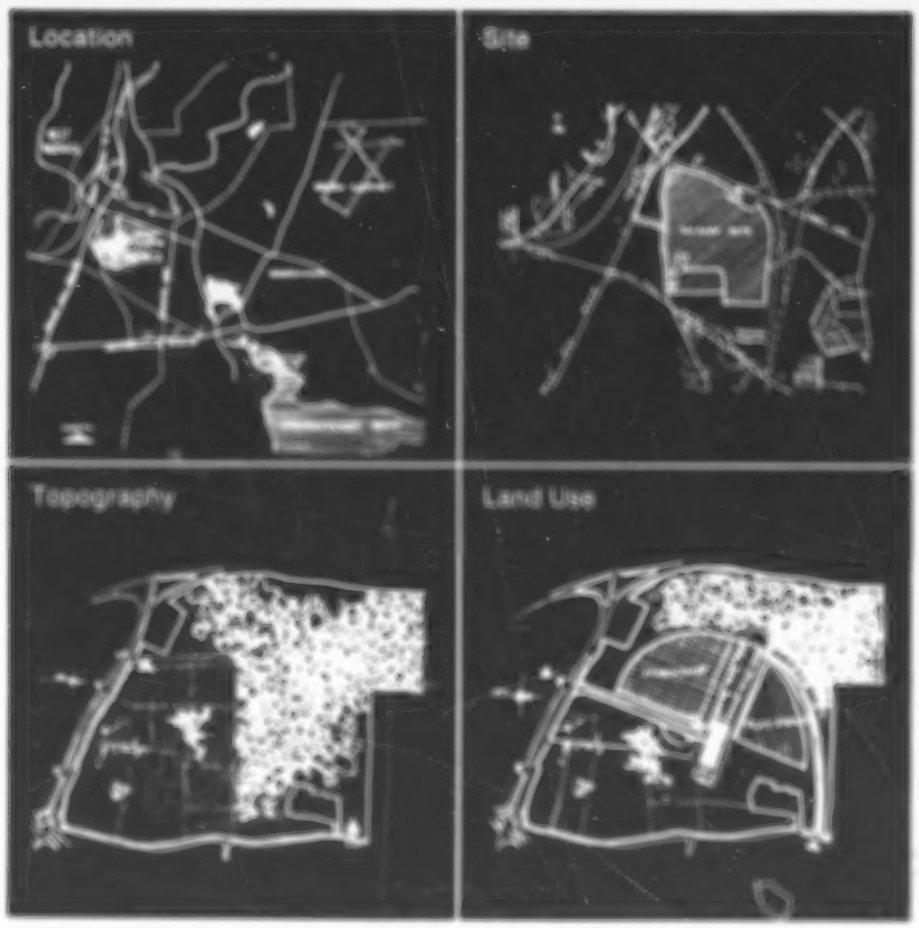


Architects: The Perkins & Will Partnership
and Finkel & Finkel

case study 2 | **knight campus**
rhode island junior college
warwick, rhode island






Location
Site
Topography
Land Use

Program

A master plan is required for a two-year junior college offering both academic transfer courses and terminal vocational and technical training. Facilities are to be grouped by function rather than by department to encourage student intermingling and for greater efficiency of use. A planned growth by stages is desired; Stage I will serve 2,400 students; Stage II, 4,400; and Stage III, 6,000—the ultimate capacity.

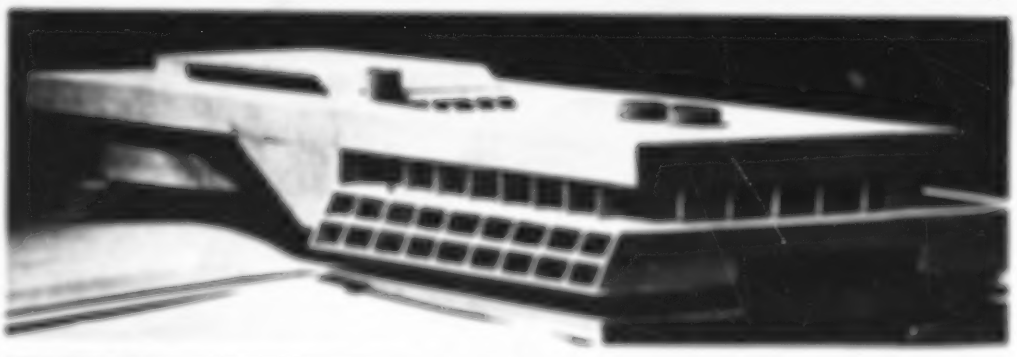
Site

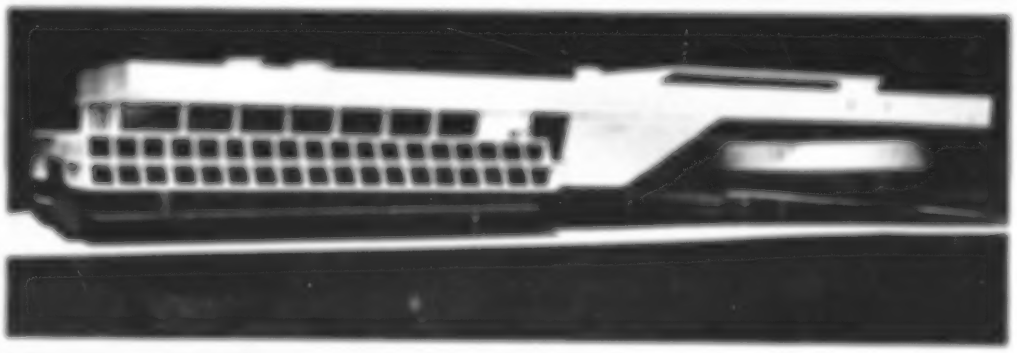
The rural site, 180 acres of wooded rolling hills, is bordered by an interstate highway and newly-improved state highways. The area is rapidly developing into a suburb of Providence.

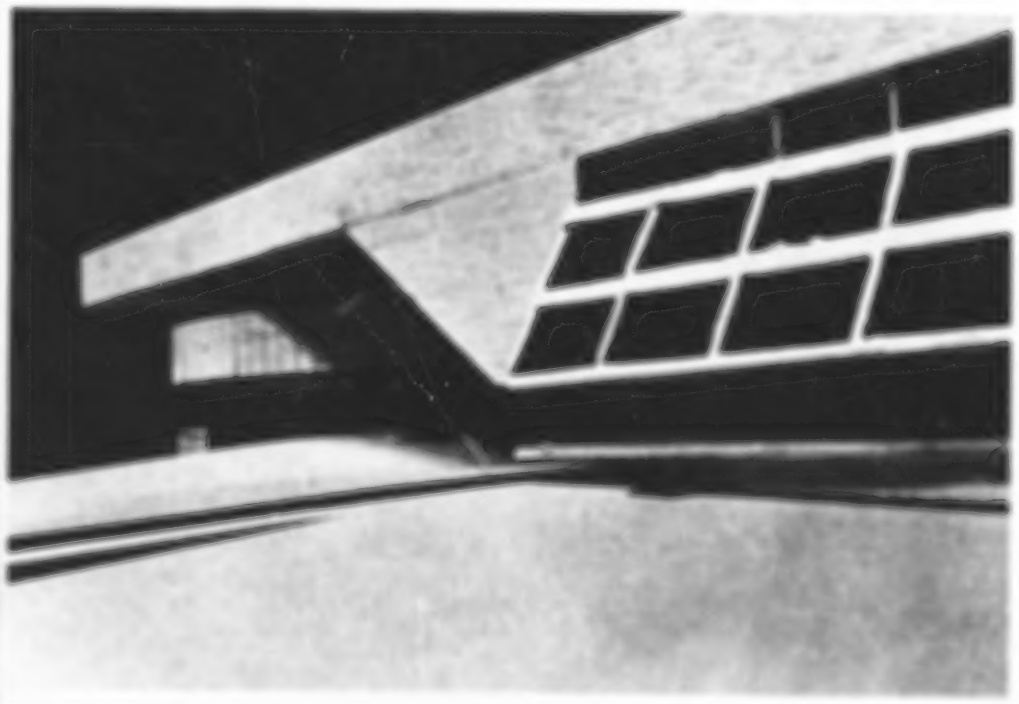
Solution

The structure creates an enclosed central commons space surrounded by the teaching modules and is designed to permit contiguous additions. The commons space thus becomes the great mixer. The building is penetrated by automobile and pedestrian ramps. Parking areas are concentrated to permit the campus to remain as much as possible in its natural state.

A three dimensional order of the total system, including circulation, automobiles, students, teaching modules, mechanical services, and structural systems, has been established. This order will respond not only to the present goals, but also will accommodate the forces of change and growth.

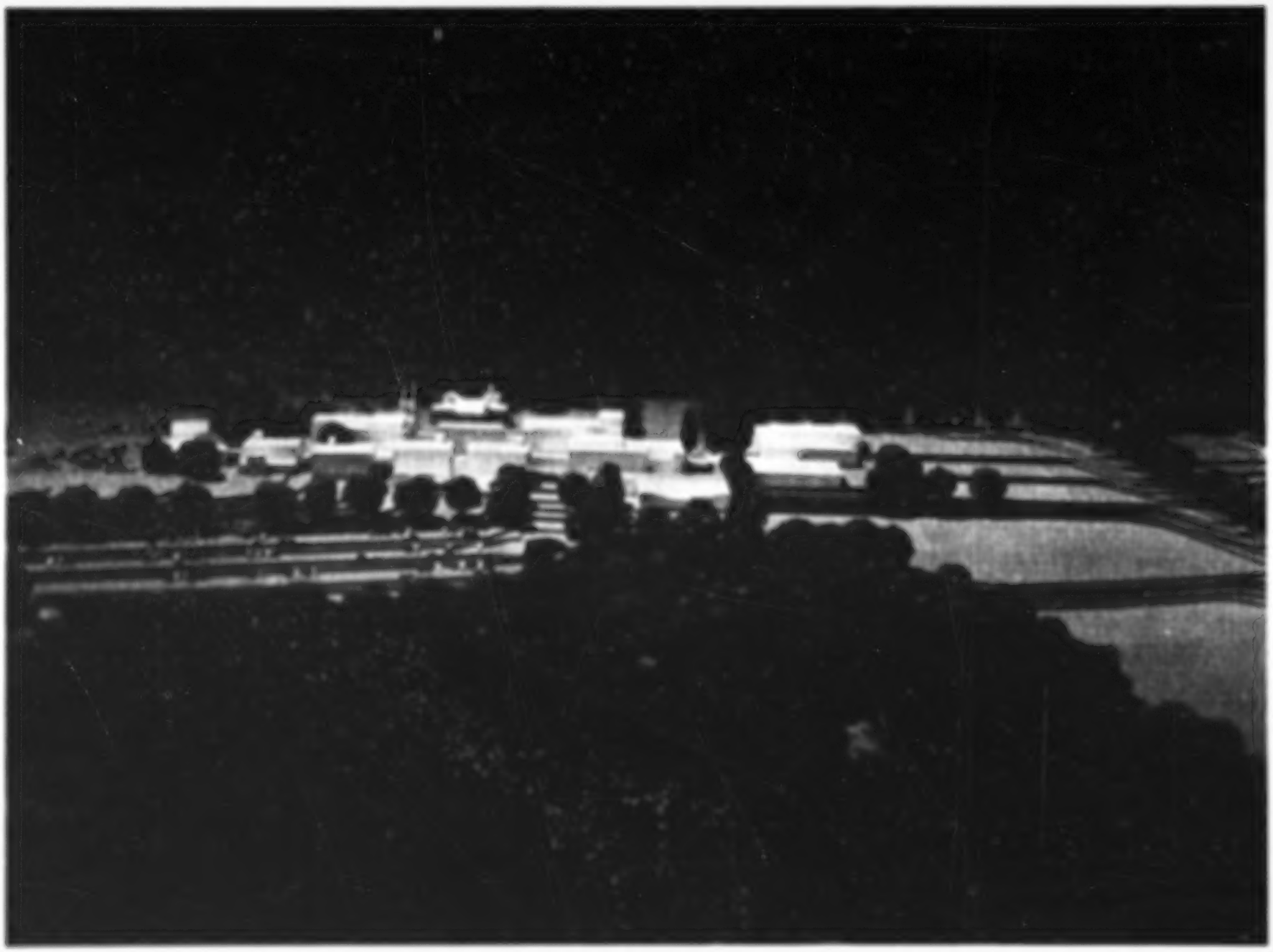


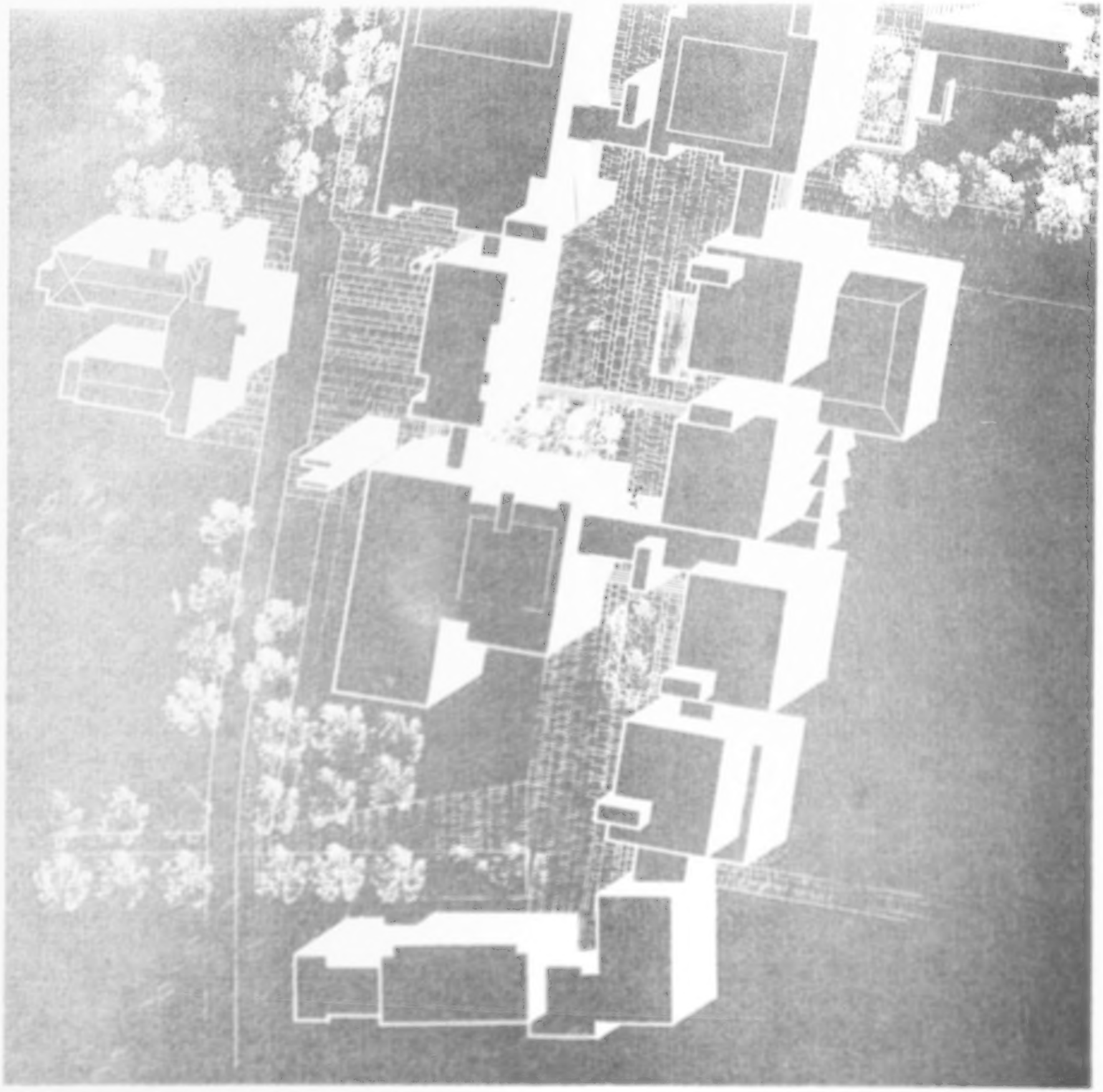




Architects:
The Perkins & Will Partnership,
Albert Kahn Inc. & Peter Gaddis
and Robinson, Green & Beretta

case study 3 | **rockland community college**
rockland county, new york





Program

The present 1,300 students will grow to an enrollment of 4,800 by 1980 and will require an increase from 110,000 square feet to 550,000 square feet during the same period. This growth may be considerably accelerated.

The college will become the community cultural and educational center, serving all of Rockland County. The community-oriented program must be clearly recognized in the design of the college. Vocational subjects are light and academic subjects are primary in the design of teaching spaces. There is a possibility that the college library may in the future become the central resource center for all of the county's public libraries.

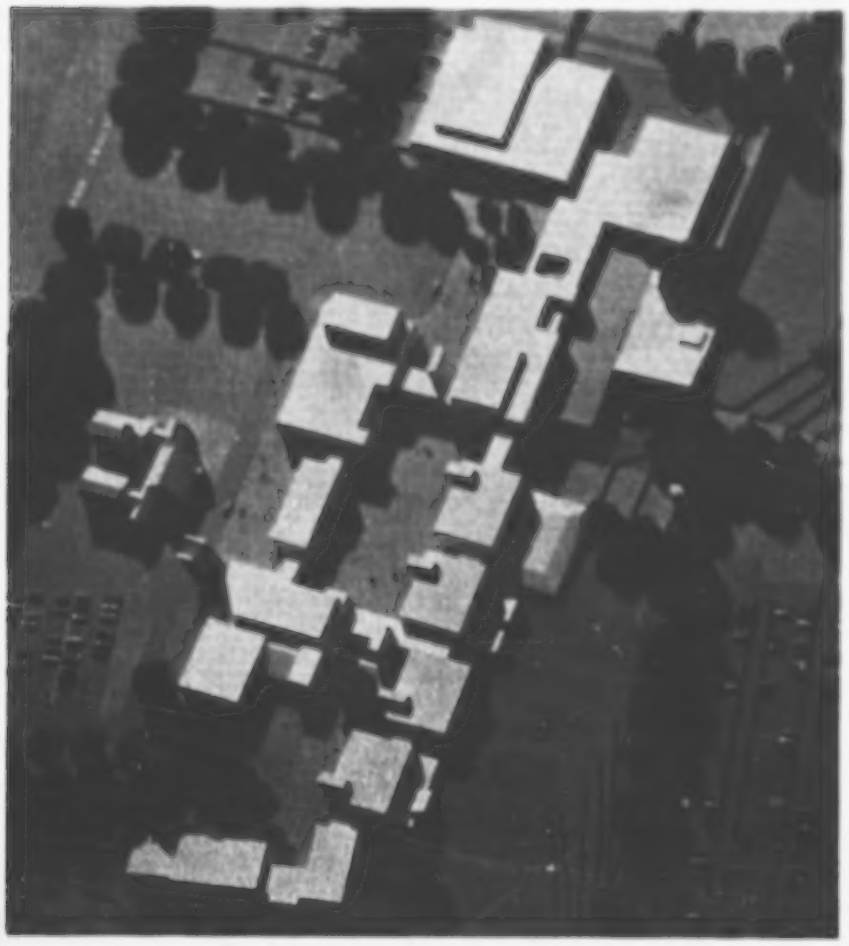
Site

The gradually rolling terrain of the 175-acre campus is well wooded with hardwood trees and apple orchards. The campus is surrounded by county roads and is rural in character. Two cemeteries on the site are restrictive to the planning.

Solution

The need to provide the county with the college cultural center required that these facilities become the central focal complex of the campus. Public access is carefully planned to this point. To provide a unity of academic purpose, all buildings are linked to each other. This is an acceptable feature during the winter months. Two cemeteries and two existing buildings on the site required the extension of the building areas as far south as possible. The central quadrangle, or "Forum", unites the art, music, drama, library, study, service organizations, lecture center and recreational facilities and creates the Community Center. This is the educational wholeness sought after by Rockland Community College.

Architects: The Perkins & Will Partnership
and Schofield & Colgan



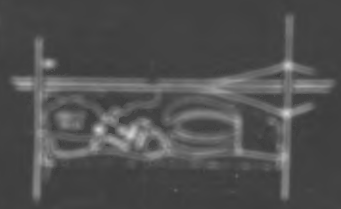
case study 4 | **oakland community college orchard ridge campus, farmington, michigan**

Location

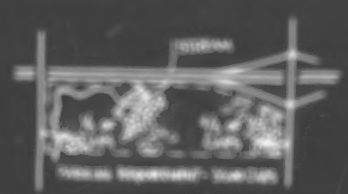
Concept

Organization

Site Plan



Access & Parking Need



Tutorial Lab Section

Program

A community college, offering an "audio-tutorial" approach to learning, is required for 5,000 students. The unusual audio-tutorial concept, based on the premise that the ideal teacher-to-student ratio is one to one, approaches the ideal by making maximum use of audio, visual, and electronic devices to extend the presence of faculty members to every student. For each course, students assemble once a week for a lecture by a master teacher. The rest of the student's time is spent, as he feels necessary, in the "tutorial laboratories." Each lab is open at least 14 hours per day with a tutor in attendance and provides individual study carrels and every audio, visual, and electronic device appropriate to the course. The labs are also used for such activities as seminars, conferences, quizzes, and socializing. This unique approach places every possible learning tool at each student's disposal.

Site

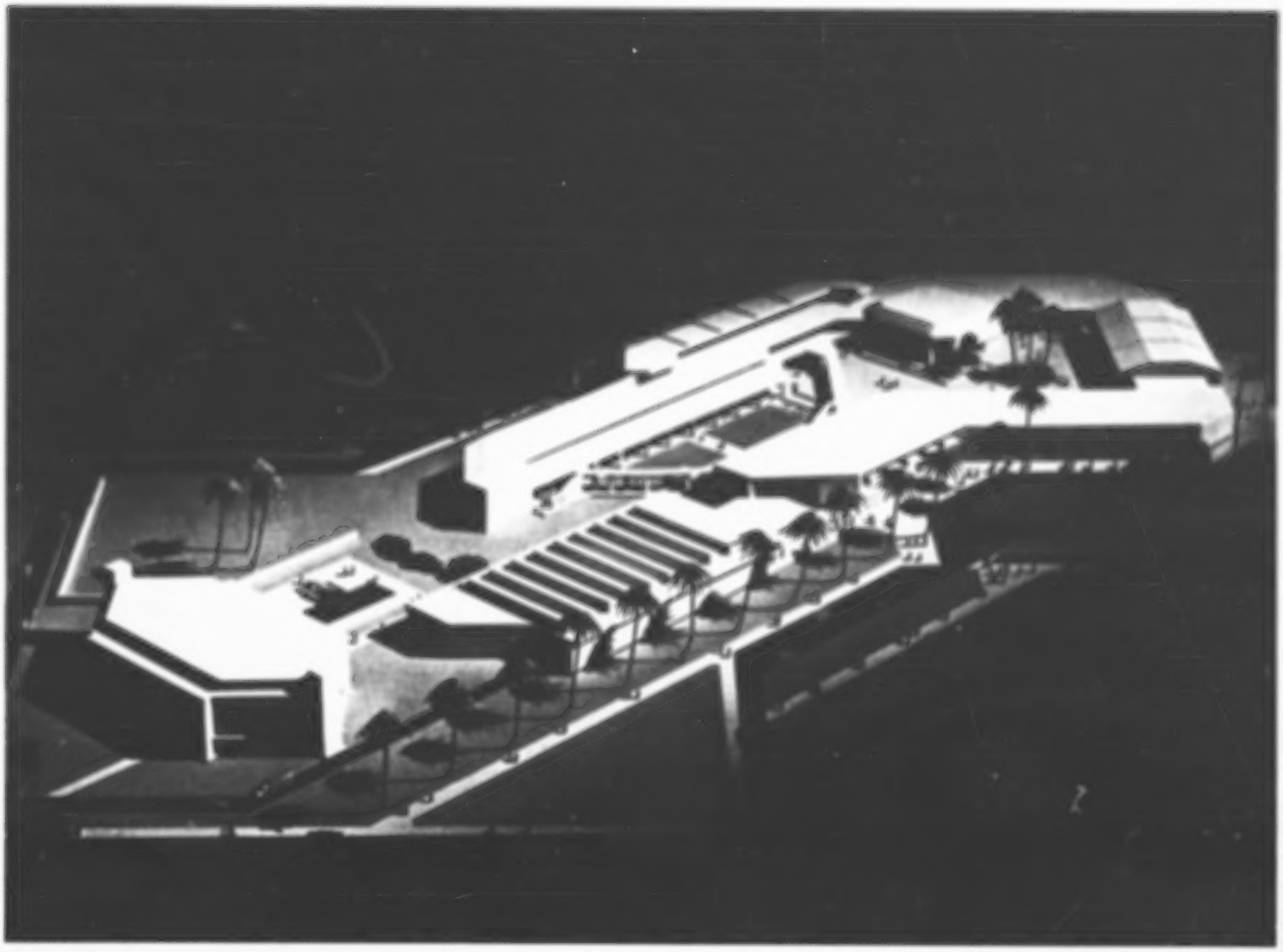
In a large residential area twenty miles from Detroit, the 150-acre site is gently rolling and heavily wooded with a small stream at one corner. The east-west dimension of the site is one mile; the north-south dimension is one-quarter mile. Approximately 80% of the vehicular traffic will enter the site from the east.

Solution

The unique audio-tutorial philosophy requires no classrooms. Hence, the architectural solution provides a plan without classrooms which utilizes a central core of three buildings housing the common facilities: lecture centers, student commons, and library. Clustered around the core facilities are seven tutorial lab buildings, each of which includes four labs, office, storage, toilet, and lounge areas. Physical education facilities and parking for 3,500 cars complete the complex.

Architects: The Perkins & Will Partnership
of Michigan and Giffels & Rossetti

case study 5 | **college of alameda**
alameda, california



Program

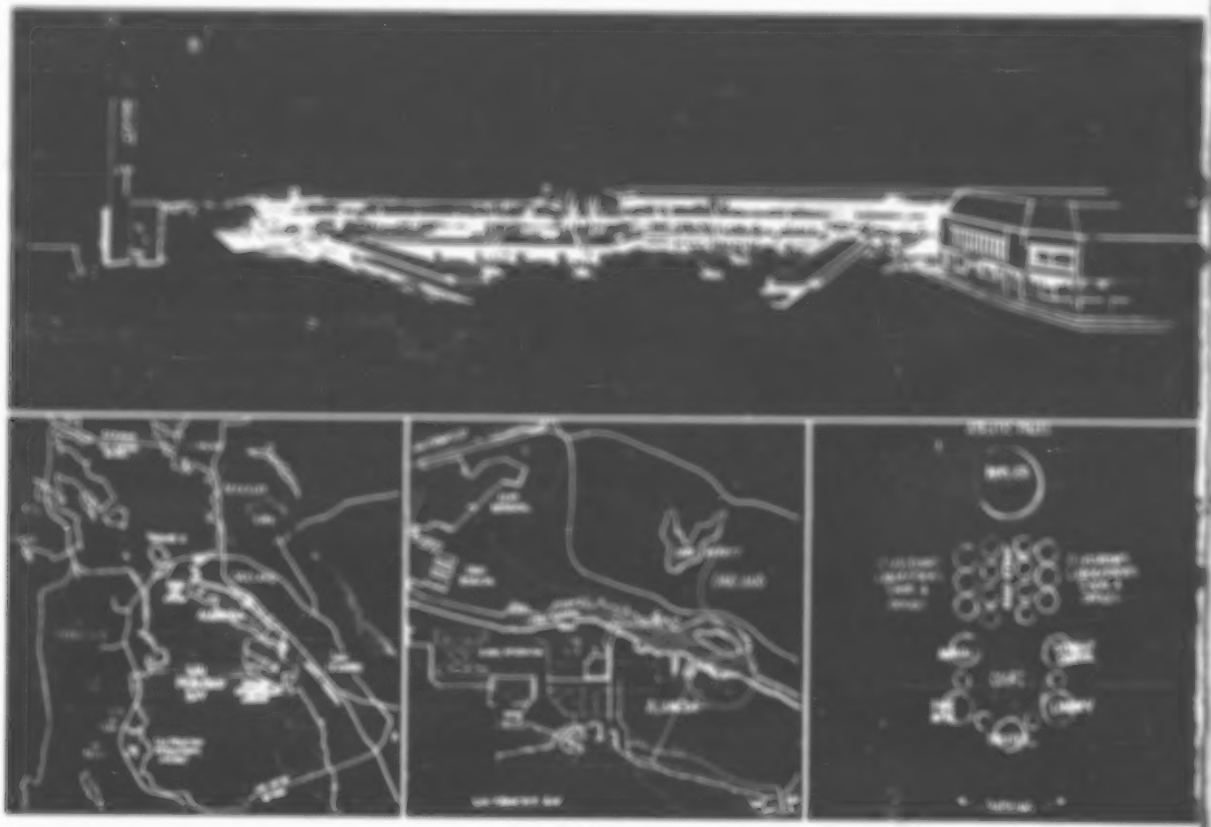
A two-year community college is needed to offer college transfer programs, terminal vocational and technical training, and general liberal arts and adult education. Construction will be in two phases: Phase I will provide facilities for 1,500 students; Phase II will serve 4,000 students, the ultimate capacity. Three additional campuses are being planned in the district. Campus design should encourage the vocational and college transfer students to intermingle, not only in the library and student center, but throughout the entire college.

Site

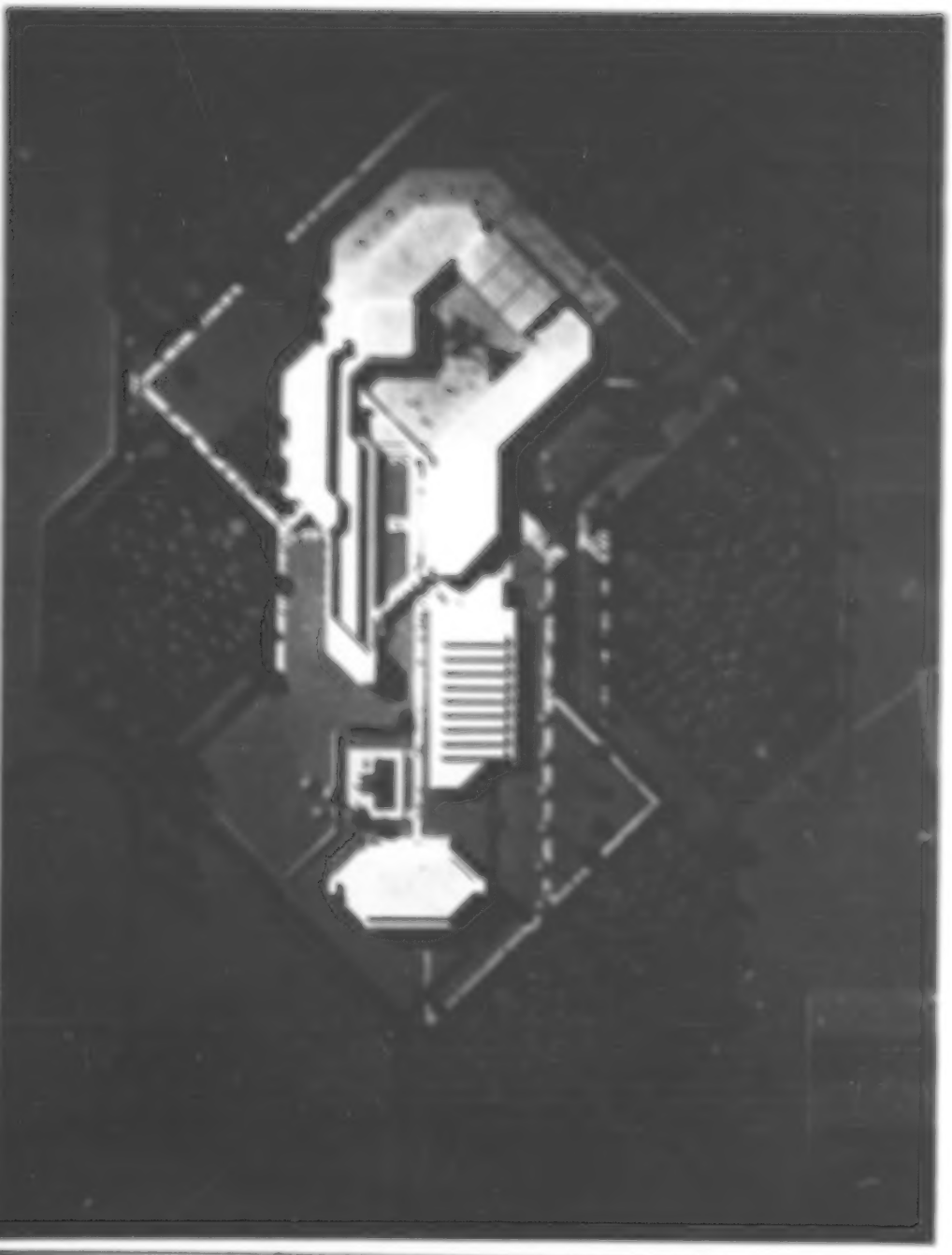
The site consists of approximately 62 acres of flat land, adjacent to the tunnel entrance to the island from Oakland and near the Alameda Naval Air Station. The general character of the area is one of middle-class multiple housing units, shipyards and commercial development.

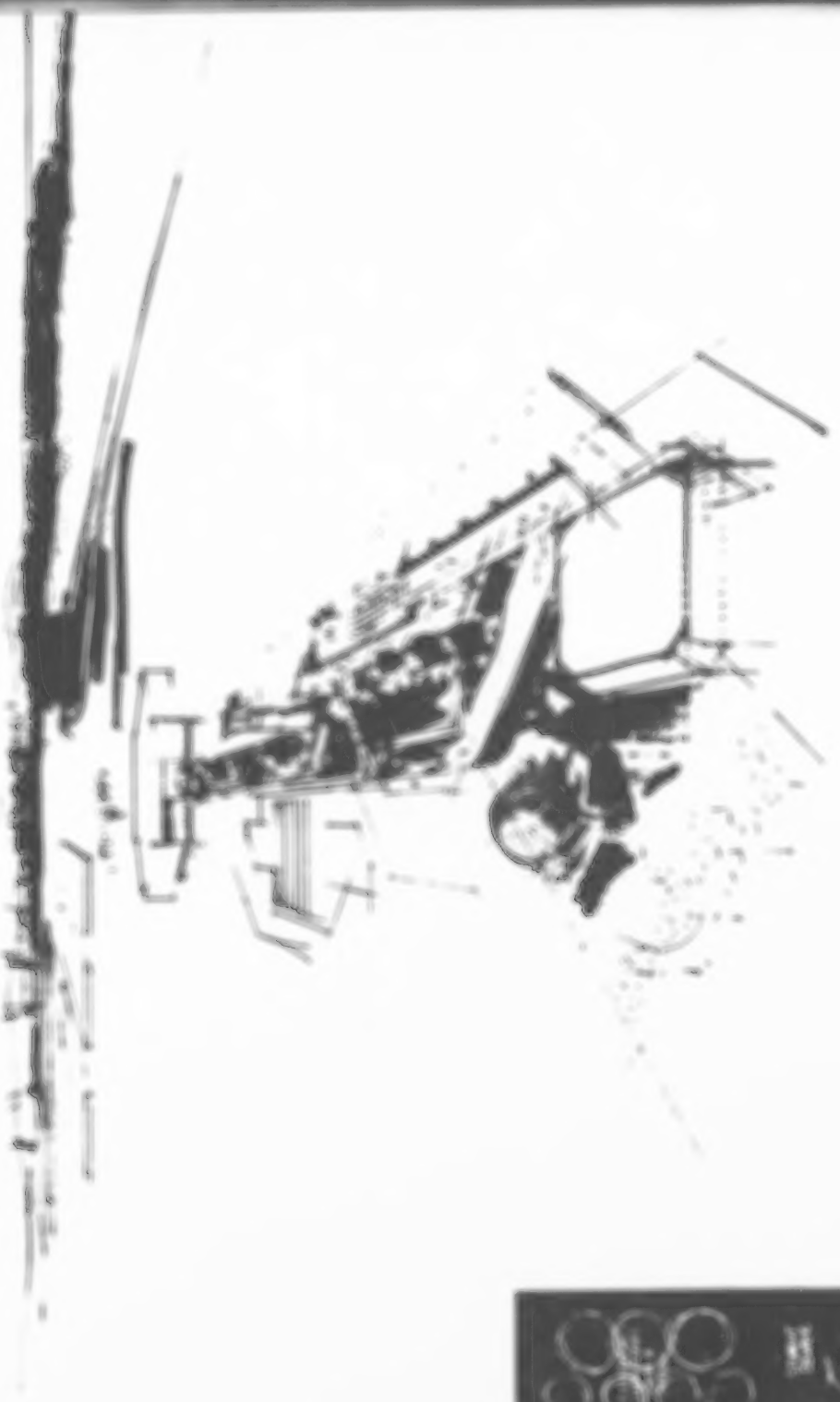
Solution

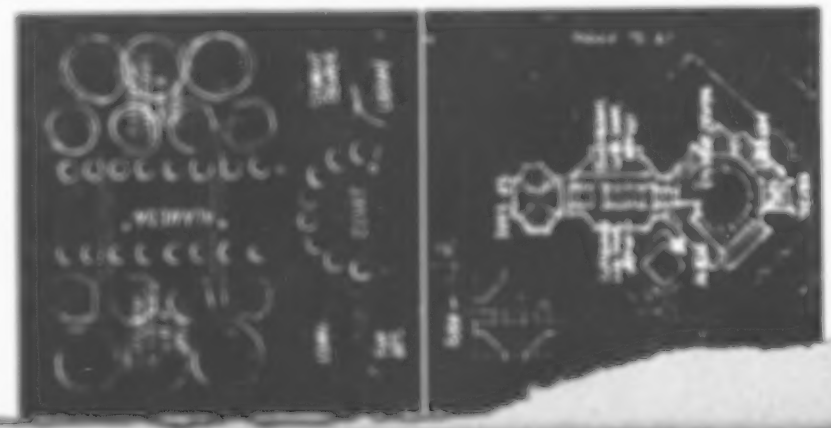
The design was based primarily on two key factors: (1) the dullness of the site and environs suggested an inward-looking campus where the major vista would be the college itself; (2) the administration's desire to deliberately mix the vocational and transfer students. These factors gave rise to a "main street" or "central mall" type of plan in which students can mix between classes and enjoy a colorful environment. The plan is a departure from standard planning concepts which advocate radiating individualized functions from a centralized activity center. At Alameda, activity centers at opposite ends of the campus generate movement and interaction among the students.



Architects: The Perkins & Will Partnership
and Stone, Marraccini and Patterson

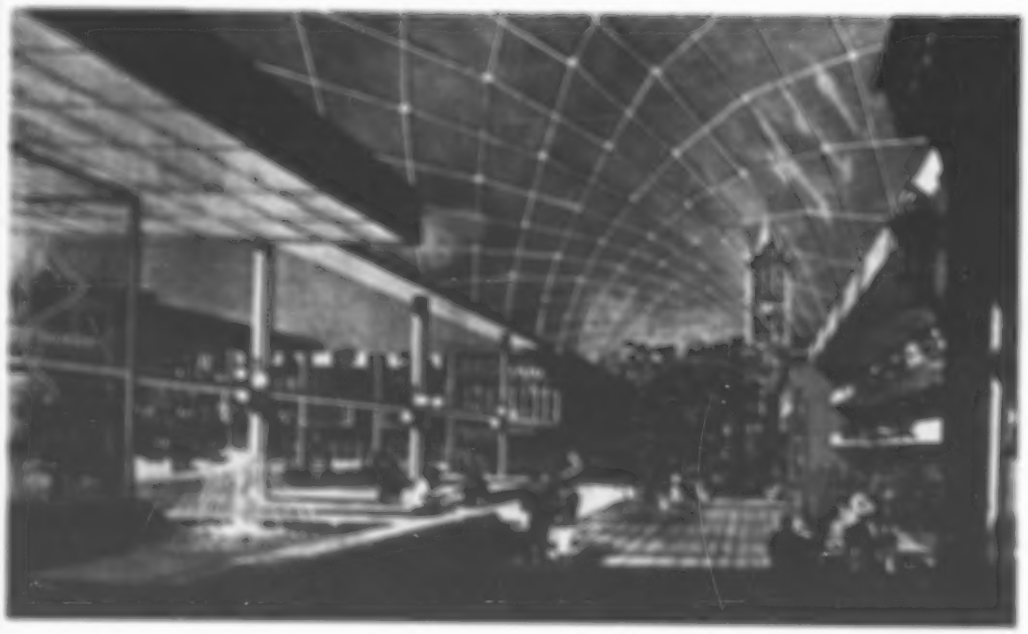






Solution

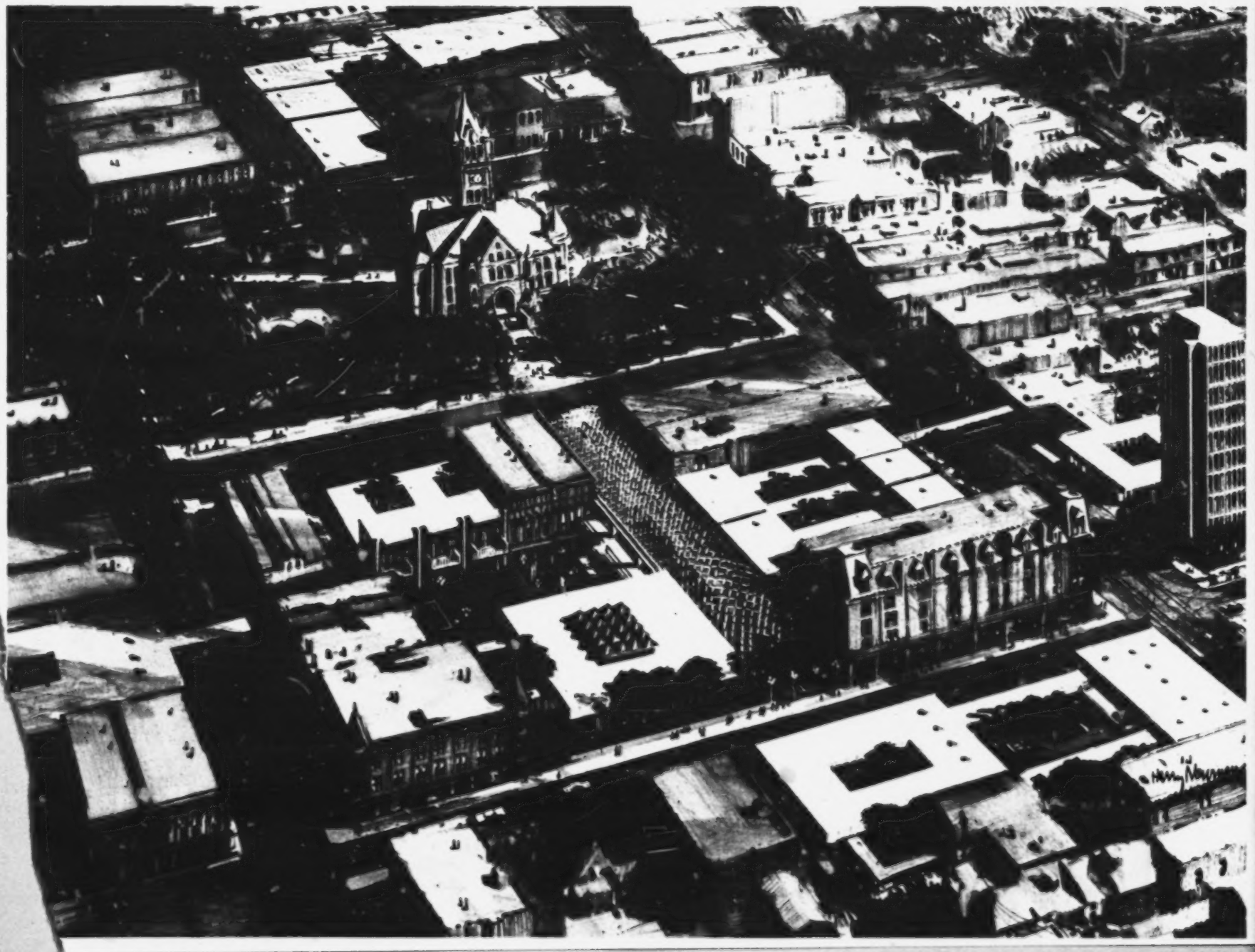
Still useful vintage buildings such as stores, garages, shops, and factories are remodeled for trade and technology training facilities; the aging movie theater is converted to a teaching auditorium; the remodeled bank becomes the student center; converted stores and office buildings become the health center and administrative offices. Eyesores or unsafe structures are demolished to provide space for new buildings or simply open spaces to enhance the campus plan. Open spaces function to unite the old and new. Existing community facilities such as library, arena, museum, art center, and swimming pool are shared with the community college.



A study by The Perkins & Will Partnership for the Johnson Service Company

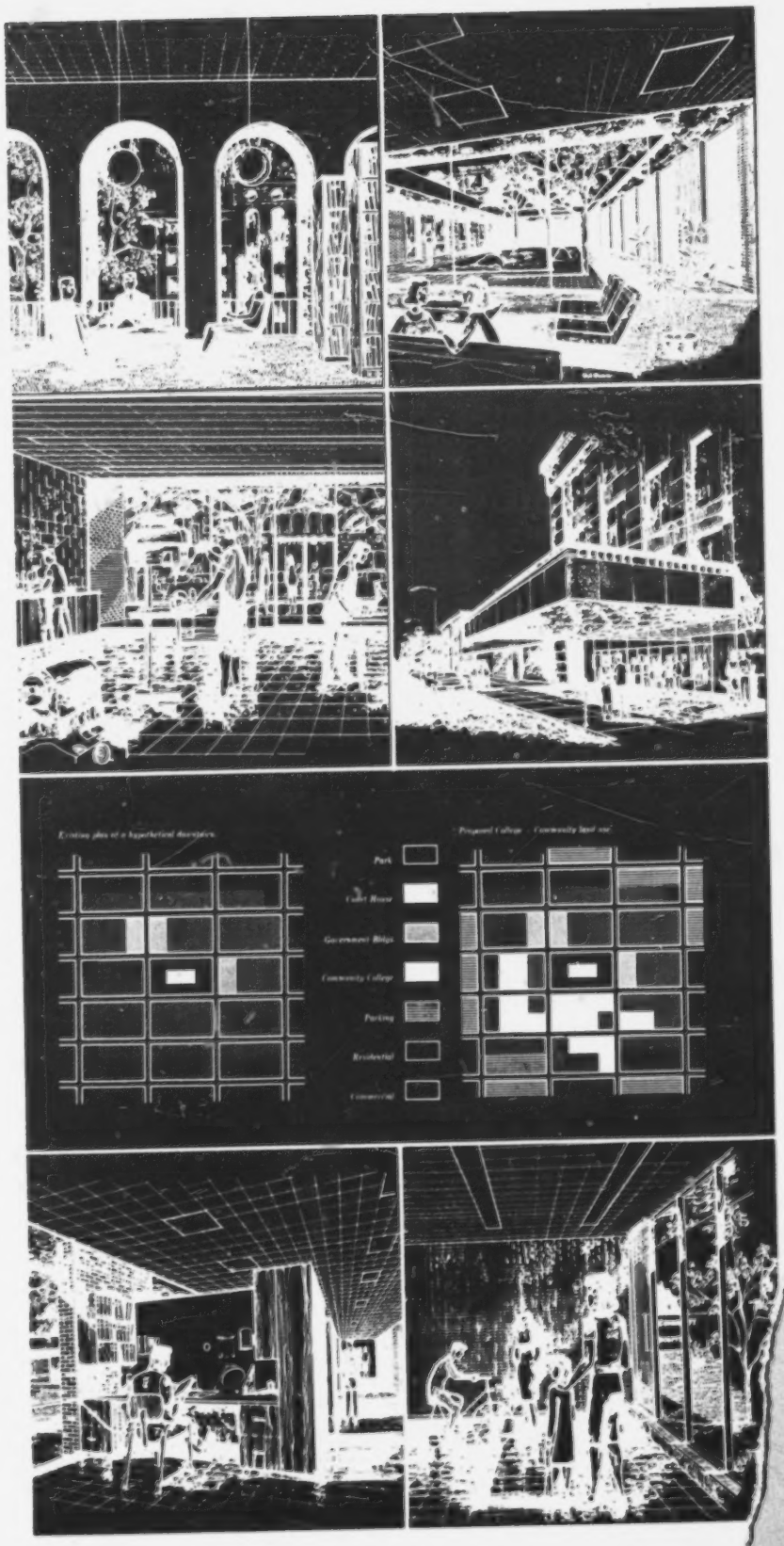
Both Williamsport and Grand Rapids which follow on pages 59 and 60 are in the early design stages at the time of writing. They are included to emphasize that the ideas and principles of this case study can become reality.

case study 6 | community + college
a study of the community college in the city



Program

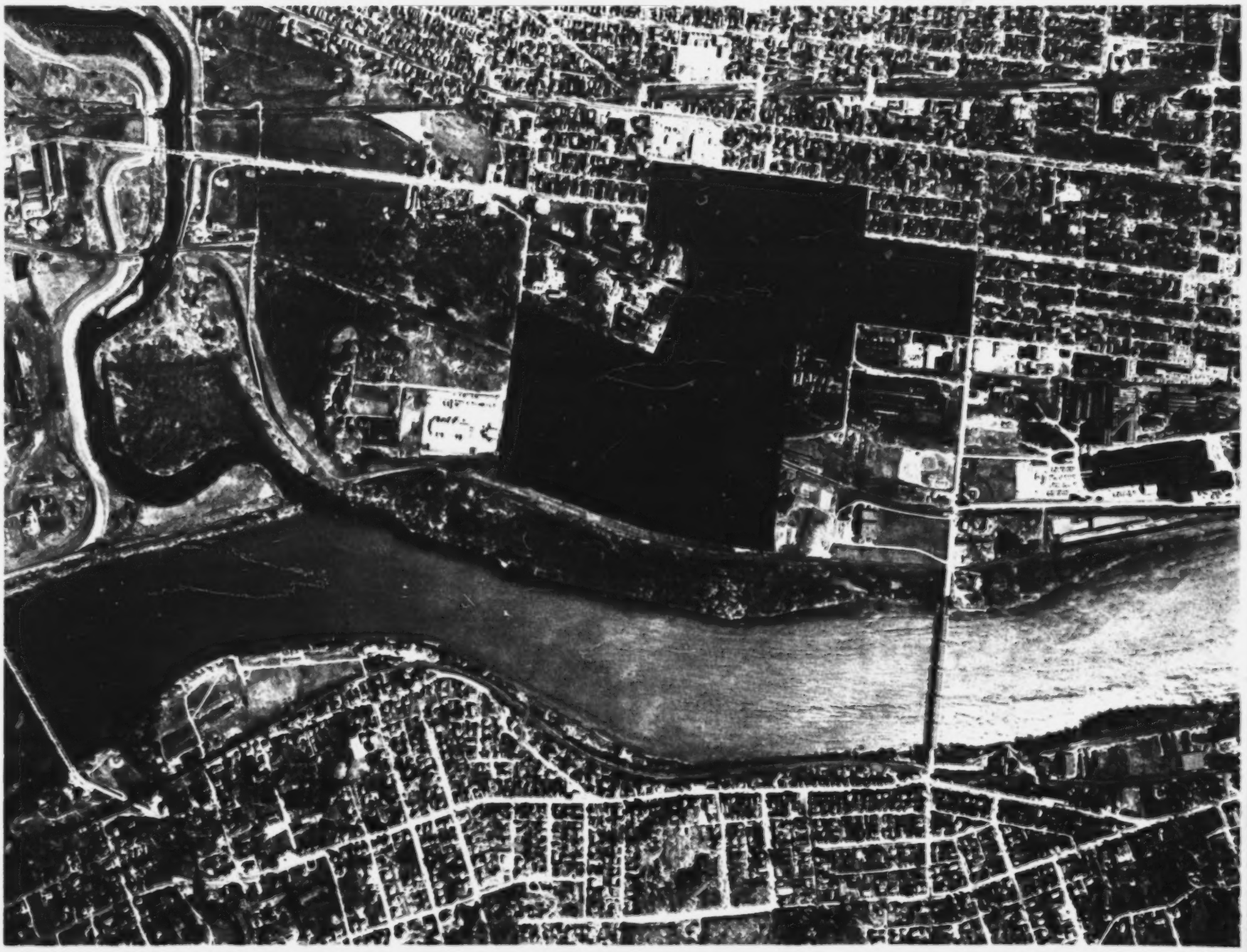
The concept of community plus college suggests a single solution to the dual problems of urban renewal and the increasing demand for educational facilities. Integrated into the aging center of a community, the community college can kindle the flickering spark of life into an active flame and regenerate the heart of the community. A new community college in sound, existing structures in a downtown location would offer the inherent advantages of a central location; existing transportation systems; access to nearby existing public institutions; a close relationship with business, industry, and government; the student, surrounded by lively community activities, will benefit from a "total education" environment.



Williamsport Area Community College

The Board of Trustees elected to build on a run-down site close to the center of town. Part of the site belongs to the old High School, the rest will be developed through Urban Renewal. It was selected to implement a confirmed purpose. It is now up to the architect to create the correct environment.

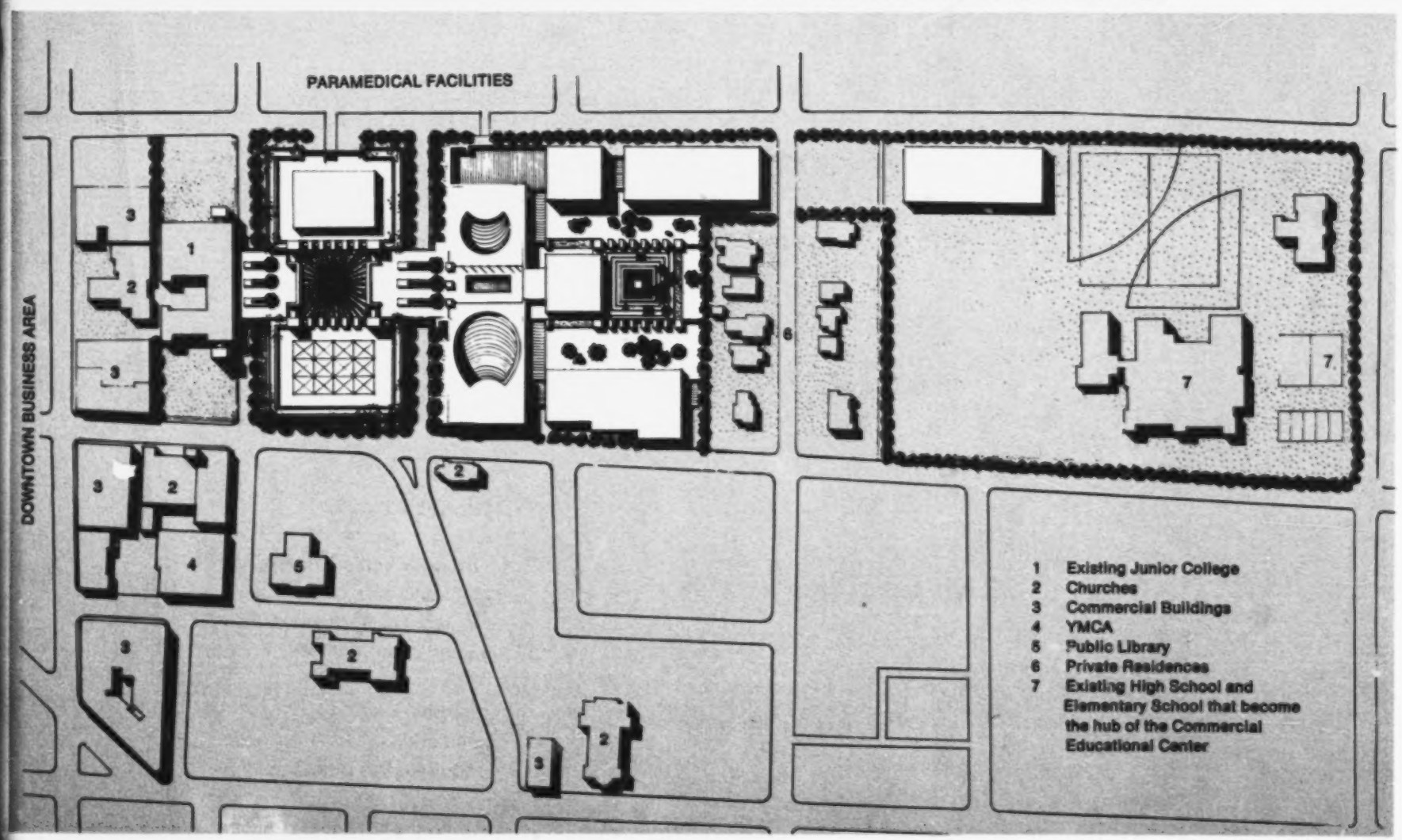
Architects: The Perkins & Will Partnership



Grand Rapids Junior College

This sketch from preliminary study shows (white buildings) how expansion of the downtown junior college would be correlated with the programmed aims of adjoining churches, private schools of art, business, paramedical studies, and musical, dramatic and art societies. The Master Plan would link the existing Junior College building (1) with new buildings (white) at upper floor level. The space beneath the new buildings would be used for a 1,000-car parking area and vehicular circulation.

Architects: The Perkins & Will Partnership of Michigan


PARAMEDICAL FACILITIES
DOWNTOWN BUSINESS AREA
1 Existing Junior College
2 Churches
3 Commercial Buildings
4 YMCA
5 Public Library
6 Private Residences
7 Existing High School and Elementary School that become the hub of the Commercial Educational Center

procedure for master planning

Successful master planning is the result of careful analysis of the problems to be solved in context with existing conditions of site and buildings. The following is a suggested sequence of investigation and joint action by Architect and Educator.

Define philosophical objectives:
Academic—social—cultural—community relationship.

Establish basic criteria:
Present and future enrollment—curriculum—class hours—recreation and social program—student and community policies—parking—public transportation—community use of facilities.

Selection of suitable site:
Relationship to community—transportation—size of college—future growth—other institutions—neighbors—zoning—services and protection—microclimate—cost—potential for environmental development—availability.

Establish space requirements:
Subject areas—classrooms—laboratories—shops—libraries—seminar and study rooms—offices—lockers—individual study spaces—recreational and social areas—dining and coffee shops—athletic and physical fitness spaces—parking—site usage.

Establish functional relationships:
Shared spaces—interrelated interests—faculty needs—maximum travel distance—convenience factors—future growth—administrative feasibility—flexibility—community accessibility.

Establish size of spaces:
Net space areas for each type of function—future growth consideration—storage elements—circulation and service requirements—gross college area.

Assessment of existing facilities:
Suitability of existing buildings—expandability of site—access and traffic patterns—life of buildings—services and capacity—neighbors.

Services and utilities:
Water—gas—electricity—sewerage—site drainage—communications—heating—cooling—protection system.

Establish site land use:
Establish and reserve areas of the site to their particular use.

Develop master plan drawings:
Overall plan—site boundaries—new and existing building locations—roadways and walkways—parking—athletic fields—landscape treatment—future land use—utilities—site drainage—highway improvements.

Develop action plan:
Tabulation of individual building costs—overall campus costs—staging of construction in keeping with demand—staging of construction in keeping with anticipated political and financial climate—tabulation of sources of funds—legislation governing funding procedures—tabulation of current annual capital costs—tabulation of design and construction starting dates.

Explanation of design philosophy:
Quality of building and spaces designed—suggested materials—texture—aesthetic requirements of each building within the plan.

for more information

The following organizations are excellent sources of information on area community colleges and/or the general subject of campus planning:

American Association of Junior Colleges
1315 Sixteenth Street, NW, Washington, D.C. 20036
Telephone: (202) 462-4031
Dr. Edmund J. Gleazer, Jr., Executive Director

Educational Facilities Laboratories, Inc.
477 Madison Avenue, New York, N.Y. 10022
Telephone: (212) 751-6214
Dr. Harold B. Gores, President

Community College Planning Center
School of Education, Stanford University
Stanford, California 94305
Telephone: (415) 321-2300
Dr. Lewis B. Mayhew, Director

Junior College Clearinghouse
Educational Research Information Center
of the U. S. Office of Education,
University of California at Los Angeles,
405 Hilgard Avenue, Los Angeles, California 90024
Telephone: (213) 272-8911
Dr. Arthur M. Cohen, Director

Society for College and University Planning
University of Michigan
326 East Hoover Street, Ann Arbor, Michigan 48104
Telephone: (313) 764-2455
Mr. John D. Telfer, Executive Director

University Facilities Research Center
University of Wisconsin
Madison, Wisconsin 53706
Telephone: (608) 262-1234
Mr. Byron C. Bloomfield, A.I.A., Director

about this book

"Why A Master Plan?" is based on the experience of The Perkins & Will Partnership, Architects, in developing campus plans and/or designing facilities, including those for the following institutions:

BRONX COMMUNITY COLLEGE
New York, New York

CHICAGO CITY COLLEGE
Chicago, Illinois

COLLEGE OF ALAMEDA*
Alameda, California

EDISON JUNIOR COLLEGE*
Fort Myers, Florida

ELGIN JUNIOR COLLEGE*
Elgin, Illinois

ESSEX COMMUNITY COLLEGE
Essex, Maryland

GRAND RAPIDS JUNIOR COLLEGE
Grand Rapids, Michigan

LORAIN COUNTY COMMUNITY COLLEGE*
Elyria, Ohio

OAKLAND COMMUNITY COLLEGE*
Farmington, Michigan (Orchard Ridge Campus)

RHODE ISLAND JUNIOR COLLEGE
Warwick, Rhode Island (Knight Campus)

ROCKLAND COMMUNITY COLLEGE*
Suffern, New York

SANDHILLS COMMUNITY COLLEGE*
Southern Pines, North Carolina

WILLIAMSPORT AREA COMMUNITY COLLEGE
Williamsport, Pennsylvania

**With associate architects.*

Development of the book involved the participation of the following men who are active in Community College Planning for the firm's three architectural offices:

F. Philip Brotherton, A.I.A. — *David K. Pyle*, A.I.A.
(55 Church Street, White Plains, N.Y. (914)948-6490)

Charles William Brubaker, A.I.A. — *Wilmont Vickrey*, A.I.A.
(309 W. Jackson Blvd., Chicago, Illinois (312)427-9300)

A. Whitney Murphy, A.I.A. — *F. Lee Cochran*, A.I.A.
(1030 15th Street NW, Washington, D.C. (202)296-7433)

Project Team:

Richard C. Siegel, Betty J. Ritter, A.I.A.
Michel J. P. Senet, Frances Shaw
Richard C. Heinrichs, James B. Ash

F. Philip Brotherton, A.I.A., Partner in Charge